



ANNUAL REPORT
OF THE
CITY ENGINEER
OF
TORONTO
FOR
1908



TORONTO
THE CARSWELL CO., LIMITED, CITY PRINTERS, 19 DUNCAN, COR. ADELAIDE WEST
1909

R. Rogers

ANNUAL REPORT
OF THE
CITY ENGINEER
OF TORONTO FOR 1908.



TORONTO:
The Carswell Co., Limited, City Printers, Cor. Adelaide and Duncan Sts.
1909.

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TORONTO

TOPOGRAPHY.—The City of Toronto is situated upon the northern shore of Lake Ontario, about forty miles easterly of its western terminus. It lies in latitude $43^{\circ} 39' 10''$ north, longitude $79^{\circ} 23'$ west, on a plateau gently ascending north for a distance of $3\frac{1}{2}$ miles, where an altitude of about 220 feet above the lake level is reached. It extends about eight miles along the lake, and is generally level, with slight depressions at points where minor water courses previously existed. The harbor is formed in front of the City by a sandy island, which lies to the south, at a distance of about a mile and a half.

Toronto is the capital of the Province of Ontario, and in it are situated the Provincial Parliament Buildings and Government House, the residence of the Lieutenant-Governor of the Province.

STATISTICS.

AREA.—The area within the City limits, not including the portions of the City land covered by water, is about 24.38 square miles.

POPULATION.—The population of the City is about 315,000.

PUBLIC STREETS AND LANES.—Within the City limits there are 306.31 miles of streets and 95 miles of lanes, of which 234.36 miles are paved, and 71.95 miles unpaved

PAVEMENTS AND ROADWAYS.—

Asphalt.....	101.07 miles
Asphalt block.....	0.97 "
Cedar block.....	24.77 "
Brick.....	23.90 "
Macadam.....	44.16 "
Wood on concrete.....	0.45 "
Stone and scoria block.....	2.36 "

PAYEMENTS AND ROADWAYS.—*Continued.*

Gravel	13.65 miles.
Bitulithic	15.66 "
Tar macadam.....	5.71 "
Concrete pavements	1.56 "
Unpaved roadways.....	71.95 "

SIDEWALKS.—

Stone flag.....	1.821 miles
Concrete.....	340.919 "
Brick	3.366 "
Wood	80.00 "

SEWERAGE.—The City is drained by what is known as the combined system of sewers, and there are 275.01 miles of sewers.

WATER WORKS.—The Water Works system is owned and operated by the City, the supply being obtained from Lake Ontario through a 6-ft. steel conduit laid across Toronto Island to the south tunnel shaft near Hanlan's Point, and from thence through a tunnel 8 ft. 4 in. in diam., laid under Toronto Bay to the Main Pumping Station on the water front, the water being pumped through the City mains, the surplus going to the Reservoir situated north of the north City limits. Cost of system to date, about \$6,000,000.

STATIONS AND ENGINES.—

Main Pumping Station.

No. 1 Engine,	4,000,000 gals. capacity, 24 hours
" 2 "	8,000,000 " " "
" 4 "	10,000,000 " " "
" 5 "	10,000,000 " " "
" 6 "	15,000,000 " " "
" 7 "	15,000,000 " under construction.

High Level Pumping Station.—Two engines with a total capacity of 6,000,000 gallons in 24 hours, and one 6,000,000 gallon engine under construction

Island Pumping Station.—One engine 500 000 gallons capacity and one engine of 1,000,000 gallons capacity in 24 hours.

323.743 miles of water mains.

65,306 water services.

3,725 street hydrants.

3,164 valves.

2,768 meters in use.

WATER RATES.—Average schedule, $3\frac{3}{4}$ cents per 1,000 gallons, and by meter, $10\frac{1}{2}$ cents per 1,000 gallons.

60,000 water takers.

Pressure—Domestic and fire 50 to 90 lbs.

Average quantity pumped in 24 hours, 29,232,449 gallons.

Water consumed annually, 10,704,829,147 gallons.

Fuel used—soft coal screenings.

Cost of fuel during 1908, \$49,226.46.

General receipts, constructing and moving services, etc.	\$	2,792	45
Revenue collected in 1908 by schedule rate.....		241,356	50
“ “ “ meter rate		232,342	56
Charges made against different branches of City service for water used.....		86,511	69
Total.....	\$	563,003	20
Operating expenses, including cost of collecting rates and debt charges.....	\$	563,511	81
House services, pipe laying and renewals		5,541	04
Total.....	\$	569,052	85

FIRE PROTECTION.—

A thoroughly efficient High Pressure System, pumping into independent water mains, capable of giving a fire pressure on the

same of 300 lbs. to the square inch, has been installed for the protection of the congested and manufacturing districts of the City.

- 254 officers and men in brigade.
- 96 horses.
- 80 pieces of apparatus for various purposes.
- 3,725 fire hydrants.
- 21 fire stations.
- 9 steam fire engines and 3 chemical engines.

POLICE PROTECTION.—

- 422 officers and men.
- 1 squad of 11 mounted men, 1 patrol sergeant and 1 inspector.
- 4 patrol wagons.
- 1 prison van.
- 1 headquarters and 9 stations.
- 125 patrol signal boxes.

MILITARY.—There are two regular corps stationed in the City (one mounted and one infantry), at Stanley Barracks, near the site of old Fort Ronille, and five militia corps (two mounted and three infantry), all of which have first class bands and the use of well-equipped and commodious Armouries.

LIGHTING.—There are 3 lighting companies doing business in the City. The Consumers' Gas Co. have 361 miles of mains, and 53,368 consumers, and supply gas for 1,063 street lights. Toronto Electric Light Company have 1,518 street electric arc lights, 1,200 private business arc lights, about 300,000 private business incandescent electric lights, and also 1,200 miles of overhead and underground wire, and 80 miles of underground conduit.

TELEPHONE AND TELEGRAPH SERVICE.—The Bell Telephone Company is the only company doing business in the City. They have 26,000 telephones in use, 28,000 miles of overhead, 55,000 miles of underground wires, 30 miles of underground conduit, and 225 miles of ducts.

There are two telegraph companies doing business in the City, the Great North-Western Telegraph Company, with 70 sets of instruments and 260 miles of overhead wires; and the Canadian Pacific Railway Telegraph Company.

PUBLIC PARKS.—The Public Parks of the City are under the control of the City Council. There are 40 public parks, having a total area of about 1,640 $\frac{1}{4}$ acres.

EDUCATION.—The educational system is under the direction of the Board of Education and the Separate School Board. There are 68 public schools, having a total of 782 rooms, with a staff of 841 principals and teachers. Four collegiate institutes, 3 high schools and 1 technical high school, having a total of 89 class rooms, with a staff of 116 principals and teachers.

Eighteen separate schools, with a staff of 99 principals and teachers.

- 2 Industrial Schools (Protestant).
- 1 Industrial School (R. C.)
- 30 Colleges, Seminaries and Pay Schools.
- 1 Technical School.
- 5 Universities.
- 3 Cathedrals of all denominations.
- 228 Churches of all denominations.
- 7 Synagogues and several Jewish Churches.
- 48 Missions.
- 5 Mission Training Schools.
- 9 Convents.

PUBLIC LIBRARIES.—There is a Reference Library of 75,000 volumes in the finest library building in Canada, erected through the generosity of Mr. Andrew Carnegie; a main Circulating Public Library, and five Branch Circulating Libraries, all under the control of the Public Library Board. In these Circulating Libraries there are about 75,000 volumes and the yearly circulation is about 500,000 volumes.

PUBLIC INSTITUTIONS.—

- 62 Hospitals, Asylums and Public Homes.
- 3 Institutions for destitute and criminal classes.

LAW.—Toronto is the centre of the Law System of the Province of Ontario, having 27 Law Courts within its limits.

AMUSEMENTS.—

- 8 Theatres
- 42 Music, Concert Halls and Vaudeville Houses.
- Zoological Gardens.
- 238 Public Buildings, Halls, etc.

PUBLIC ACCOMMODATION.—

- 184 Hotels.
- 3,200 Boarding Houses.

RAILWAYS.—There are three railway companies whose systems enter Toronto, namely, the Grand Trunk Railway, with about 90 miles of track laid in the City limits.

The Canadian Pacific Railway Company, with about 36 miles of track laid in the City limits.

The Canadian Northern Railway.

109 Passenger trains enter and leave the City daily.

195 Freight trains enter and leave the City daily.

The Toronto Railway Company has the exclusive franchise for operating a street railway system within the City limits. They have 107.24 miles of tracks on the streets and 7.42 miles in the sheds, etc.; about 163 motors and 167 trailers in operation, and carried during 1908 a total of 121,840,147 passengers, of which 89,139,571 were paid passengers, and 32,700,576 were transfers. \$2,936,259.87 were received by the Company from the sale of tickets during the year, and the revenue derived by the City from the Company was \$578,994.56, for 1908.

BUSINESS.—

6 daily newspapers ; 49 weekly ; 20 semi-monthly ; 76 monthly and 8 quarterly newspapers and periodicals ; 2 directory companies.

5 Public markets.

36 Banks, not including branches.

1,450 Factories and manufactories.

396 Wholesale houses.

8 Departmental stores.

7,800 Miscellaneous business companies, corporations and stores.

SANITATION.—

Street Cleaning, Watering and Scavenging.—A modern and complete system of street cleaning, watering and scavenging is owned and operated by the city.

The supervision of the sanitary requirements of the City is under the control of the Local Board of Health.

The foregoing brief review of Toronto is annually compiled by

GEO. J. CASTLE,

Secretary to City Engineer

PAST CITY ENGINEERS OF TORONTO.—

1840-1842, Thomas Young.

1843-1852, John G. Howard.

1853, William Thomas.

1854, John G. Howard.

1855, William Kingsford.

1856, Thomas H. Harrison.

1857-1858, Thomas Booth.

1859-1860, Alfred Brunel.

1861-1870, J. H. Bennett.

1871-Oct., 1875, Chas. W. Johnston.

Oct. 1875-July, 1880, Frank Shanly.

Sept. 1880-July, 1883, R. J. Brough.

Oct. 1883-1889, Charles Sproatt.

1890-Sept., 1891, W. T. Jennings.

Sept. 1891-May, 1892, Granville C. Cunningham.

May, 1892-Jan., 1898, E. H. Keating.

ANNUAL REPORT

OF THE

CITY ENGINEER

OF THE

CITY OF TORONTO

FOR THE YEAR 1908

CITY ENGINEER'S OFFICE,
Toronto, December 31st, 1908.

To His Worship the Mayor and Members of the Council of the Corporation of the City of Toronto:

GENTLEMEN.—In compliance with By-law No. 2534, I have the honor to lay before you the Annual Report of the Department for the year ending 31st December, 1908, setting forth the various works carried out during the year, with details of cost of construction, and suggestions and recommendations as to new works and improvements required.

OFFICIAL STAFF.

City Engineer and Chief Engineer and Manager
of the Water Works Chas. H. Rust, M. Can. Soc.
C.E., M. Am. Soc. C.E.

Deputy City Engineer C. L. Fellowes, M. Can. Soc. C.E.

Engineer in charge of Electrical Department... K. L. Aitken, A.M. Soc. C.E.

Asst. Engineer in charge of Bridges John Williams, M. Can. Soc. C.E.

Asst. Engineer in charge of Sewers..... J. D. Shields.

Asst. Engineer in charge of Roadways, outside
work G. G. Powell, A.M. Can. Soc. C.E.

Asst. Engineer in charge of Roadways, Office
work..... M. A. Stewart.

Asst. Engineer in charge of Main Drainage
work A. C. D. Blanchard, A.M. Soc.
C.E.

Asst. Engineer in charge of Main Drainage work F. W. Thorold.

Accountant Wm. McCartney.

Secretary Committee on Works A. H. Clarke.

Secretary to City Engineer..... Geo. J. Castle.

Chief Clerk..... H. M. Berryman.
 Chief Engineer Main Pumping Station..... Alex. McRae.
 Chief Engineer High Level Pumping Station... Thos. Walsh.

FINANCIAL.

During the year just closed the amount of money expended and the work carried out exceeds any previous year, and I am pleased to point out to your Council that most of the work has been of a permanent character.

The total expenditure of the Department, including Water Works, amounted to \$3,074,023.55, which was divided as follows:

Water Works	\$933,249 63
General and special work	809,712 31
Street Railway track allowance pavements....	19,231 79
Local Improvements	1,296,015 37
Island Works	15,814 45
Total	\$3,074,023 55

This is the largest amount expended by this Department in any one year, being an increase of \$594,915.99, or nearly 26% over 1907.

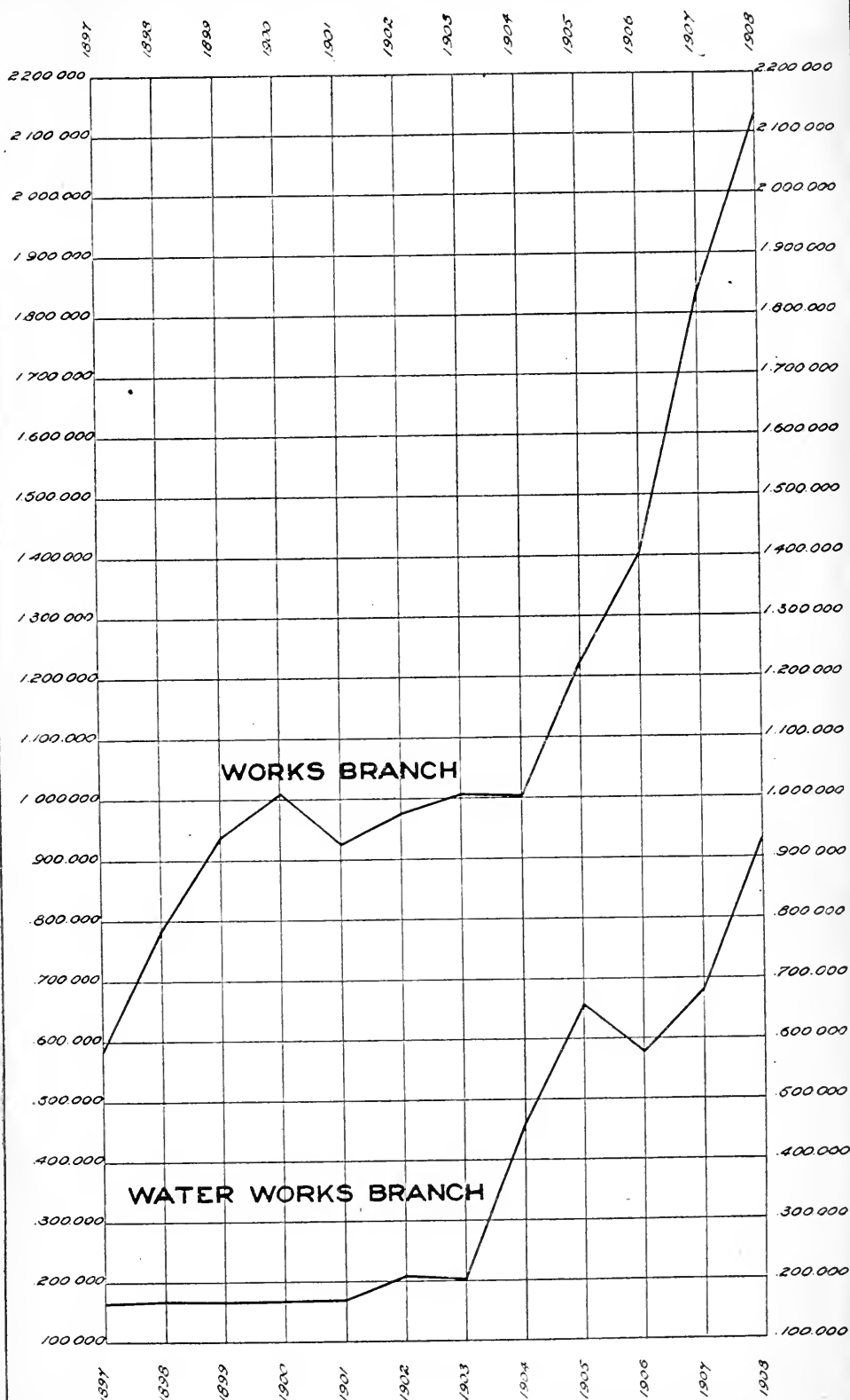
Expenditure upon Local Improvements was divided as follows:

Roadways	\$809,965 05
Sidewalks	267,006 51
Curbs	26,146 80
Sewers	119,504 22
Street openings, extensions, etc.	73,392 79
Total.....	\$1,296,015 37

GROWTH OF CITY.

During the year 778.1 acres have been added to the area of the City by the annexation of East Toronto and Deer Park. The applications for annexation to the City, of Wychwood, Bracondale, and that portion of East York lying between Greenwoods Avenue and East Toronto have been postponed for a short time. These districts and West Toronto will no doubt be joined to the City during the coming year. With the exception of West Toronto, there has been very little improvement work done in these districts, and a large number of new roadways, sidewalks, sewers, water-mains, etc., will be required. This will add very considerably to the work of this Department.

DIAGRAM OF EXPENDITURE



CITY ENGINEERS OFFICE
TORONTO APRIL 5-1909

STREET RAILWAY MATTERS.

Very little progress has been made towards relieving the congestion which now exists during the rush hours, owing to the City and the Street Railway Company failing to agree upon what new routes should be constructed. The Company are willing to build certain extensions in the down town districts, but are not prepared to consider any other extensions until these lines are constructed. This did not meet with the approval of the City Council, and the matter was brought before the Ontario Railway and Municipal Board, and a decision was handed down in favor of the Company, but pending an appeal by the City no further action can be taken.

It is very regrettable that two corporations which are so closely interested in trying to obtain a good street railway service cannot reach an amicable arrangement, as it inflicts a great deal of unnecessary hardships upon the citizens using the cars.

TEMPERATURE AND RAINFALL.

Through the courtesy of Mr. R. F. Stupart, Director of the Meteorological Department, a table is attached showing the temperature and rainfall during the year:

STATEMENT OF MONTHLY TEMPERATURE AND PRECIPITATION
AT TORONTO FOR 1908.

Month.	Temperature.			Precipitation.		
	Mean.	Max.	Min.	Rain.	Snow.	Total.
	°	°	°	in.	in.	in.
January.....	23.9	41.3	-14.2	0.610	19.0	2.510
February.....	18.7	44.9	-17.4	1.170	26.1	3.780
March.....	31.1	62.9	9.0	0.920	6.2	1.540
April.....	41.8	75.3	17.5	1.725	6.0	2.325
May.....	56.2	84.0	29.4	4.630	0.1	4.640
June.....	66.0	86.9	44.0	2.970	.....	2.970
July.....	70.4	91.5	52.9	2.930	.....	2.930
August.....	66.6	90.4	44.1	2.830	.....	2.830
September.....	62.9	86.1	37.9	1.295	.....	1.295
October.....	50.4	76.9	28.2	1.010	.....	1.010
November.....	39.6	62.7	23.0	1.240	3.7	1.610
December.....	28.5	49.3	6.0	0.390	16.7	2.060
Year.....	46.3			21.720	77.8	29.500

NOTE.—Ten inches of snow equals one inch of rain.

RECORD OF RAINFALL AT RESERVOIR GROUNDS FOR
THE YEAR 1908.

Day.	Jan.	Feb.	March	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	
1st.....													
2nd.....				0.16									
3rd.....													
4th.....	0.02						0.15	0.02					
5th.....								1.52					
6th.....			0.35	0.15									
7th.....							0.38			0.09			
8th.....				0.30	1.26						0.10		
9th.....					0.04						0.03		
10th.....													
11th.....											0.26	0.75	
12th.....	0.46							0.54					
13th.....			0.03				0.03	0.13					
14th.....			0.33		0.49	0.05							
15th.....		1.06		0.09								0.04	
16th.....					0.19								
17th.....							1.05	0.48					
18th.....							0.81						
19th.....				0.42		0.34		0.06	0.01				
20th.....					0.22								
21st.....					0.05	0.16	0.25						
22nd.....				0.33									
23rd.....						0.17							
24th.....			0.14			1.45				0.37			
25th.....				0.30							0.78		
26th.....					0.26								
27th.....													
28th.....			0.49	0.05					1.03	0.42			
29th.....					0.27	0.69							
30th.....				0.22	0.35						0.21	0.56	
31st.....					1.03								
	0.48	1.06	1.34	2.02	4.16	2.86	2.67	2.75	1.04	0.88	1.38	1.35	=21.99

RECORD OF SNOWFALL AT RESERVOIR GROUNDS FOR
THE YEAR 1908.

Day.	Jan.	Feb.	March	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
	in.	in.	in.								in.	in.
1st.....		6 $\frac{2}{3}$										
2nd.....			2 $\frac{1}{4}$									
3rd.....												
4th.....												$\frac{1}{12}$
5th.....												
6th.....		10 $\frac{3}{4}$	$\frac{3}{4}$									
7th.....												3 $\frac{3}{4}$
8th.....												
9th.....												
10th.....			1									
11th.....												
12th.....	3											
13th.....												2 $\frac{1}{4}$
14th.....												
15th.....			$\frac{1}{2}$								2 $\frac{1}{2}$	
16th.....											$\frac{1}{4}$	
17th.....			1 $\frac{1}{2}$									
18th.....		$\frac{1}{2}$										4 $\frac{1}{2}$
19th.....												
20th.....		$\frac{3}{4}$										
21st.....												
22nd.....												
23rd.....	4 $\frac{1}{2}$	1										
24th.....		$\frac{1}{2}$										
25th.....												
26th.....	4	1 $\frac{3}{4}$										
27th.....												
28th.....	$\frac{1}{2}$											
29th.....												
30th.....												
31st.....												
	12	21 $\frac{1}{2}$	6								2 $\frac{1}{2}$	11
												= 53 $\frac{6}{7}$

ELECTRICAL DISTRIBUTION SYSTEM.

The sum of \$2,150,000 has been appropriated for this work, and, with the approval of the Council, Mr. K. L. Aitken, an electrical engineer of Toronto, was appointed to take charge of this branch of the Department. Mr. Aitken has been, up to the present, dealing with an entrance for the transmission line, locating main transformer stations, and considering the system of power and light distribution to be used. These points are now practically settled and specifications are being prepared and tenders will be called for early next year.

Under the contract with the Hydro-Electric Commission the City is to pay \$18.10 per H. P. for ten thousand horse power, but so far the Commission have been able to purchase their equipment at a lower figure than their estimates, which will reduce the price to be paid by the City accordingly.

LAKE LEVEL.

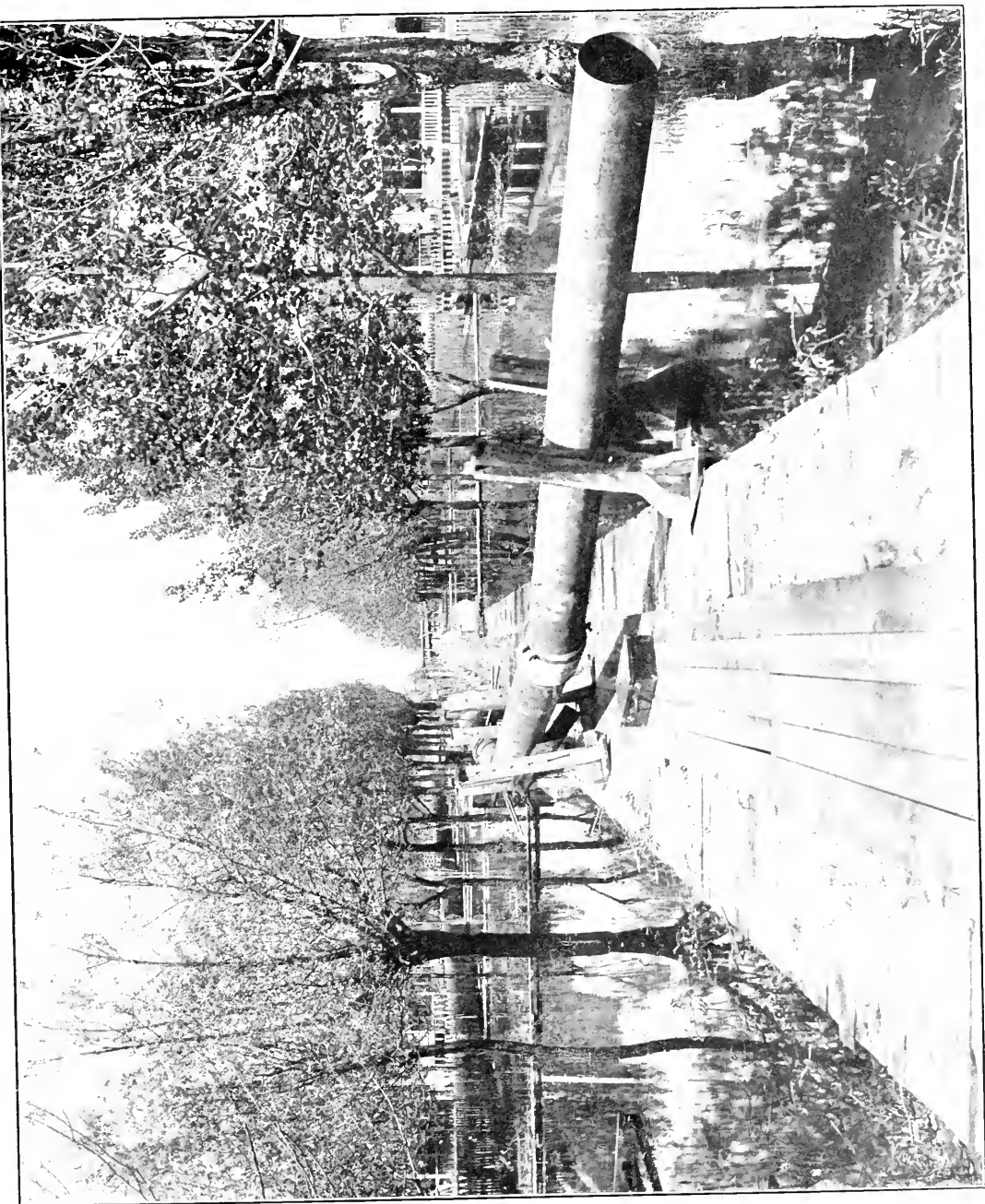
During 1908 the lake level rose to nearly 45 inches above zero. The highest record was in 1870, when it was 47 inches above zero. This unusually high water did considerable damage at the Island, flooding the lots and gardens of the residents, and also the Park, to such an extent that the Park was practically useless during a considerable portion of the season. Owing to the extreme high water the City had one of its sand pumps almost continuously employed during the earlier part of the season in filling in the lots of the residents, for which the owners paid the actual cost of the work. Whilst the high water was the cause of a great deal of trouble, it was not an unmixed evil, as a considerable portion of the Island has been raised to such a height that no further trouble of this character need be anticipated.

WATER WORKS.

FINANCIAL.

The total expenditure for the year of the portion of the Water Works Department, which is under the control of the City Engineer, amounted to \$933,249.63, divided as follows:

Maintenance	\$213,690 18
Construction	58,904 19
Renewals	7,739 33
Special Works	602,266 24
Revenue Mains	50,649 69



HIGH WATER, TORONTO ISLAND, ST. ANDREW'S AVE.

The expenditure of the Revenue and Collection Branch under the control of the City Treasurer amounted to \$560,210.75.

DISTRIBUTION.

97,289 feet of mains of various sizes have been laid during the past year. This is very much in excess of the amount laid the preceding year. The total length of mains in use in the City is 323.713 miles.

HOUSE SERVICES.

The number of house services laid during the year was 3,641.

LEAKS ON MAINS.

There were 217 leaks on the mains, and the cost of repairing averaged \$10.44 per leak. The average number of leaks per mile of distribution is 0.669, and the average cost per mile is \$6.99.

RESERVOIR.

The average depth of water in the reservoir was 16 ft. 7 in., equal to an elevation of 212 ft. 7 in. above zero level of Lake Ontario. At this level the reservoir contains 24,470,821 imperial gallons of water.

Unfortunately the reservoir could not be spared for cleaning again this year, owing to the difficulty of keeping up the supply of water in the mains.

TEMPERATURE OF WATER.

The average temperature for the year taken at the City Hall tap was 44.58 degrees, Fahrenheit. The highest temperature was 61 degrees, Fahrenheit, on the 21st of September, and the lowest 35 degrees Fahrenheit, on the 21st of March.

HIGH LEVEL PUMPING STATION.

The John McDougall Caledonian Iron Works Company, to whom were awarded the contract for the new six million gallon engine, which should have been in place during 1907, have only completed their contract late in this year, and the engine was turned over for the first time on the 21st of November, 1908, and has not as yet been taken out of the contractors' hands. The contract price was \$13,947.

A contract has also been made with the John Inglis Company and the City for the construction and erection of a duplicate six million

triple expansion pumping engine, and the progress on this engine has been very satisfactory.

MAIN PUMPING STATION.

The average daily pumping was 29,097,054, being an increase of 722,953 gallons over previous year.

HIGH PRESSURE FIRE SYSTEM.

Three hundred acres are served by this system, and the total length of mains is 45,244 feet, on which are located 146 hydrants. The whole of the pipes, valves and hydrants were tested at 450 pounds to the square inch, after being placed in the ground. All special connections are of cast steel, and pipe connections between mains and hydrants are of flanged steel. Air valves are placed at all high points on the mains.

In order to operate this system an addition was built to the main pumping station at the foot of John Street, and two 1,000 horse-power Westinghouse-Parsons horizontal steam turbines direct connected to two 2-stage five million gallon turbine pumps. The condensers in the engine room are of the Barometric type, the vacuum obtained being 27 in., City pressure being used for this purpose.

The maximum pressure used on the mains for fire purposes is 300 pounds per square inch. The speed of the turbines while maintaining this pressure and delivering five million gallons per twenty-four hours is 1,500 revolutions per minute.

On December 28th a test was made of the system by the Engineer of the Fire Underwriters' Association and was very satisfactory.

TUNNEL.

The contract for this work was awarded in the early part of 1905, and the amount of same was \$269,000. The work was finally completed on the 31st of December of this year, and the water let into the tunnel on the following day. The tunnel is a total length of 5,087 feet. A complete description of this work is given in the report of the Deputy City Engineer, who had charge of this contract.

WATER FILTRATION.

In May of this year a deputation composed of Mr. Controller Harrison, Dr. Sheard and Mr. C. L. Fellowes, Deputy City Engineer, visited Philadelphia and other cities in the United States where extensive plants

have been recently installed and efficiently operated, and as a result recommended to the City Council that Mr. Allen Hazen, of New York, be engaged to prepare plans for a filtration plant for this City. Mr. Hazen is now engaged upon this work and we expect to call for tenders early in the coming year.

HYDRAULIC DREDGE No. 3.

During the year an additional dredge known as No. 3, was constructed for the Corporation by the Polson Iron Works Company, of Toronto. The contract price was \$60,000, an additional \$15,000 being spent on pipes and pontoons.

The dredge is a hydraulic one and is capable of excavating any ordinary material, such as sand, clay, gravel, earth or mud, to a depth of 18 feet, and to make a cut 100 feet wide and deliver the same 1,200 feet from the dredge. The nominal capacity of the dredge is 250 cubic yards of material per hour, but this will vary more or less, depending on the conditions and kind of material the dredge may be operating in. The hull is of steel, with the exception of the deck, which is laid with Douglas fir planking, 4 inches wide. The length of the hull is 110 feet, by 30 feet beam, and has a moulded depth of 7 feet 8 inches at the side.

The main engines are of the triple expansion marine type, capable of developing 240 I. H. P. when turning up 250 revolutions per minute, with 160 pounds steam pressure on the boiler. The engines are direct connected with the main pump, which is of the centrifugal type, having an enclosed cast steel runner and a heavy cast iron shell. The cutter is of the rotary type and is a steel casting 4 feet 6 inches diameter, by 3 feet 6 inches long, having five cutter arms cast solid with the hub.

The forward hoisting engine is placed on the main deck near the bow. This engine operates the hoisting drum placed in the centre of the hull for raising and lowering the suction pipe. It also drives the cutter head. The dredge is controlled from the pilot house.

At the after end are placed two wooden spuds, which are raised and lowered by means of a double friction drum-hoisting engine. The other auxiliaries consist of independent air pump and jet condenser, one feed and one pony pump. There is also a complete electric light plant furnished by the Canadian Westinghouse Company, Limited, including two search lights.

Steam is supplied for all machinery by a Clyde boiler 10 feet in diameter by 12 feet long. There is also an auxiliary boiler, vertical type, to supply steam to the heating system during cold weather. This boiler is also used to supply steam to the pony pump when the main boiler is being washed out.

The quarters for the crew are very complete and commodious, including a bath room and general smoking and reading room. There are also two hand-derrick cranes, which have a lifting capacity of five tons.

Sand Pump No. 3 was constructed for the improvement of Ash-bridge's Bay, and was put into commission in July, and was engaged a great deal of the time in pumping sand into that district, the sand being obtained from Messrs. R. Weddell & Co., contractors for the new western channel.

DREDGES Nos. 1 AND 2.

These dredges were engaged at the Island during the early part of the season in filling up low lands which were flooded owing to the very high water this year. A great deal of this work was paid for by the property owners whose lots had to be filled.

ROADWAYS AND SIDEWALKS.

The total number of works undertaken and carried out by this branch of the Department during the year was 805. This is an increase over the preceding year of 104.

A summary of the works is as follows:

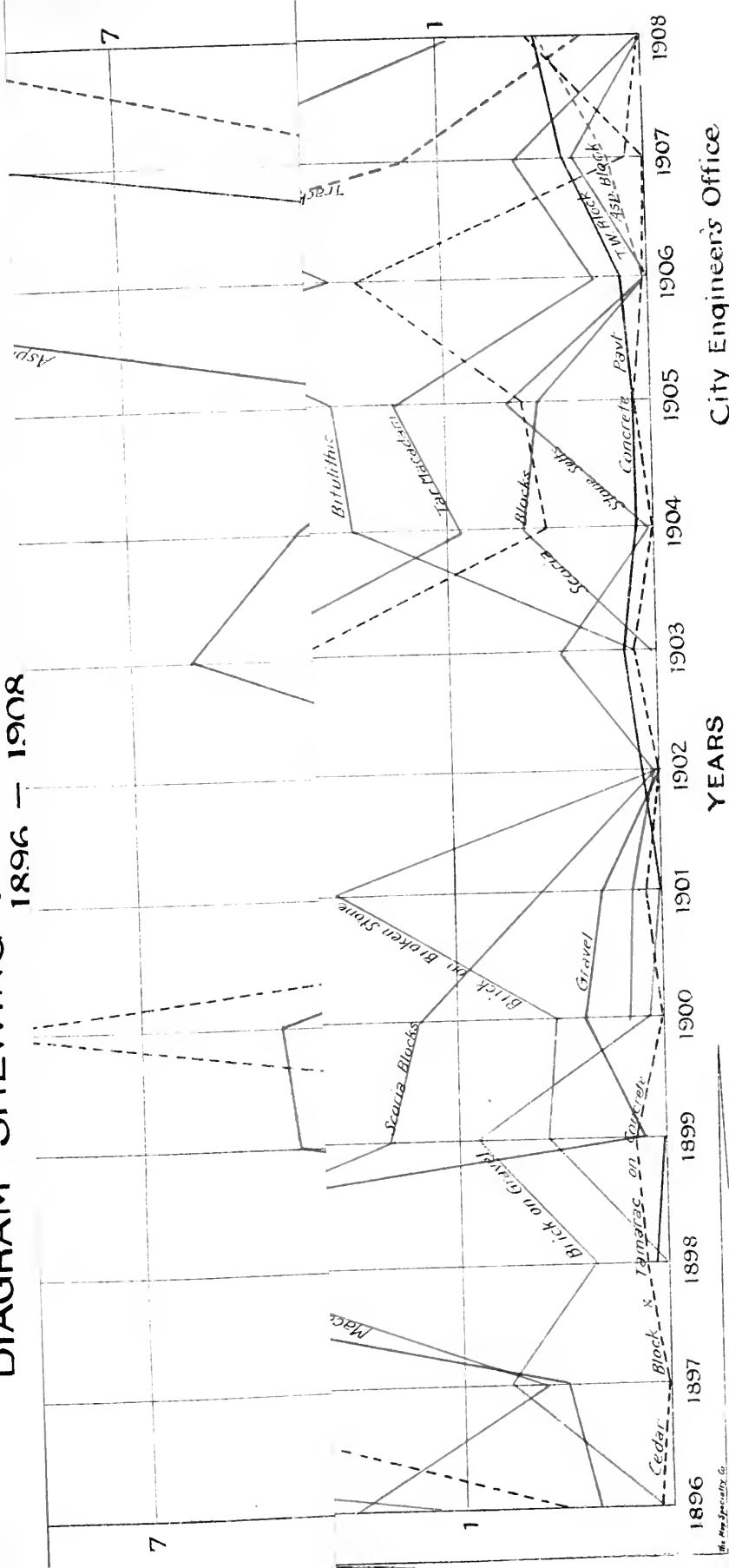
Carried over from 1907	86
Contract works	564
Day labor works	174
Private permanent works	67
	<hr/>
Total works undertaken	805

The work done includes the construction of 40,326 miles of pavements and 55,416 miles of permanent sidewalks. In addition to this there was also constructed 15,424 miles of concrete curbing.

Asphalt again proved to be the largest factor of the year's paving work, 21,031 miles being laid.

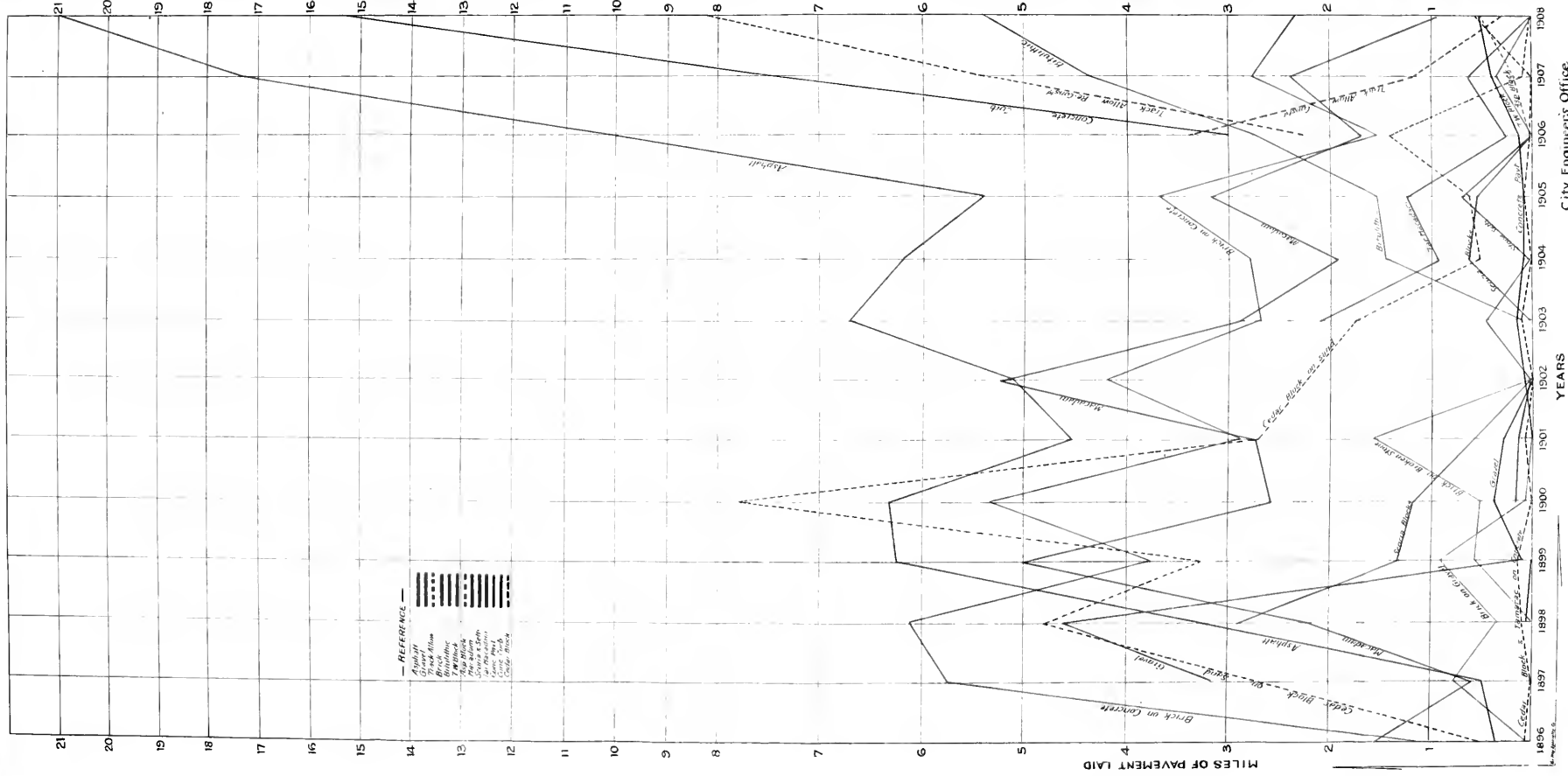
The system of doing work by day labor, which was introduced some years ago, and by which the City Engineer tenders in competition with

DIAGRAM SHEWING FLUCTUATIONS OF PAVEMENTS 1896 - 1908



City Engineer's Office
31-12-08

1896 - 1908



contractors, was continued during the year, and a considerable saving was effected to the property owners, viz., \$32,800.87.

I would suggest that your Council consider the advisability of further extending this system. By the expenditure of about \$75,000 for an adequate plant, including the purchase of a stone quarry, sand and gravel pits and an additional asphalt plant, the City would be placed in a very good position to do this work, and I am satisfied a considerable saving to the citizens would result. Details of this work are given more fully in the report of the Assistant Engineer in charge of this work.

By looking at the tables contained in the Assistant Engineer's report, it will be seen that the mileage of roadways of a permanent nature is very much increased, whilst such pavements as macadam and cedar block have made no gain.

The first pavement laid under the local improvement system was constructed during the year 1881, and the annual variation in the mileage of paved and unpaved streets, with a classification of the same up to the end of 1908, is shown in a table attached to the Assistant Engineer's report.

In connection with asphalt pavements, they have been divided into two types, light and heavy, and in some cases a light asphalt pavement has been used where a heavier type would probably have given better results. It has, therefore, been decided to establish a medium class of pavement, having a two-inch surface, one-inch binder and five-inch concrete foundation. The table in the report of the Assistant Engineer gives the average cost of asphalt pavements from 1901 up to the present time.

In 1901 the average cost of heavy asphalt was \$2.54 6-10; light asphalt, \$2.04½ per square yard. In 1908 the average price of heavy asphalt was \$2.15¾, and light asphalt \$1.51 2-5 per square yard.

During the year this Department constructed by day labor about nineteen asphalt pavements, or a length of 2.48 miles. In addition to this work 49,965 square yards of repairs were made upon pavements which are out of guarantee. The average cost per square yard of repairs was 52 cents. This price includes allowance for maintenance of plant, etc. The price paid in 1907 for this class of work by contract was 76 cents per square yard. This shows a total saving to the City of \$9,536.40, which is very good interest on an investment of \$30,000 for a plant.

A number of the large cities are now reducing the period of guarantee upon asphalt pavements from ten to five years, and in a great many cases even to one year. This long period of guarantee was exacted when very little was known as to the suitability of asphalt for street paving purposes. Recently all large municipalities have attached to their staff a chemist and in addition a well equipped laboratory, which is the case with this City. The shortening of this guarantee period will no doubt result in reducing the cost of most of our payments and will also, I think, have a tendency to produce more competition. There are at present a number of contractors, and especially large corporations, who are very loathe to allow a large amount of their capital to be locked up for so long a period as ten years.

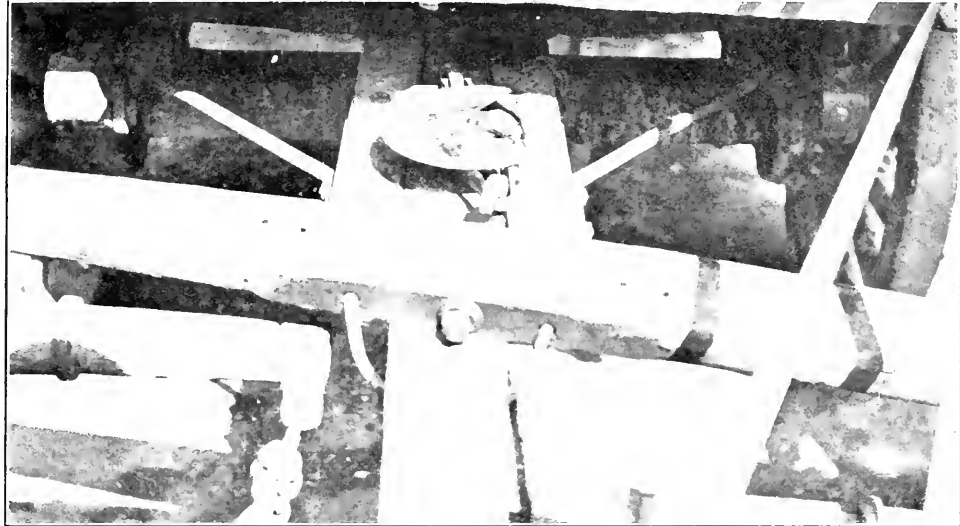
I would recommend that the guarantee be reduced from ten to five years on asphalt, bitulithic, granite setts, vitrified and wooden block pavements.

BITULITHIC.

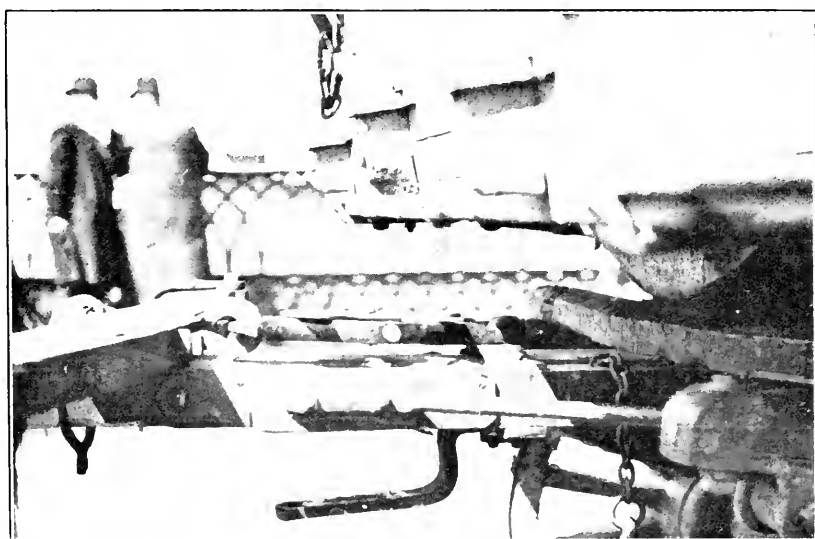
This class of pavement is still under the control of the Warren Bituminous Paving Company, who claim that this pavement is patented, and while I understand their patents have been upheld in the United States, their claims have not yet been tested in Canada, and I would recommend that this matter be referred to the Legal Department for a report as to the validity of such claims.

Under instructions from the Committee on Works, this pavement is recommended when a sufficiently signed petition is received, and the work is advertised in the usual manner, and while the Department, as is the usual practice, puts in a tender for this class of pavement, unfortunately the prices are based on the Warren Company's figures, with the result that there is no competition. In a few instances the Department has been the lowest tenderer by small amounts, but the Warren Company have always carried out the work at the Department's price.

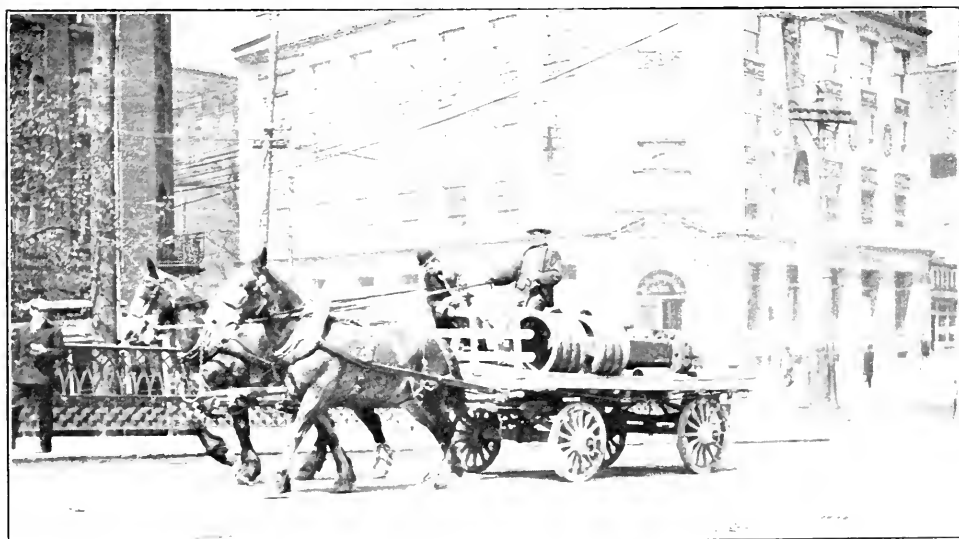
The Constructing & Paving Company were awarded the contract for a bitulithic pavement on Binscarth Road, and had laid the foundation and then applied to the Department for permission to use a mixture of asphalt instead of using the Warren Company's patented material, but permission was refused on the ground that this was not according to the specifications. The Company then stated they would be prepared to give a bond indemnifying the City and the property owners from any loss, but this was not accepted and the surface was subsequently laid by the Warren Company. Under such circumstances as these this class of pavement becomes somewhat of a monopoly.



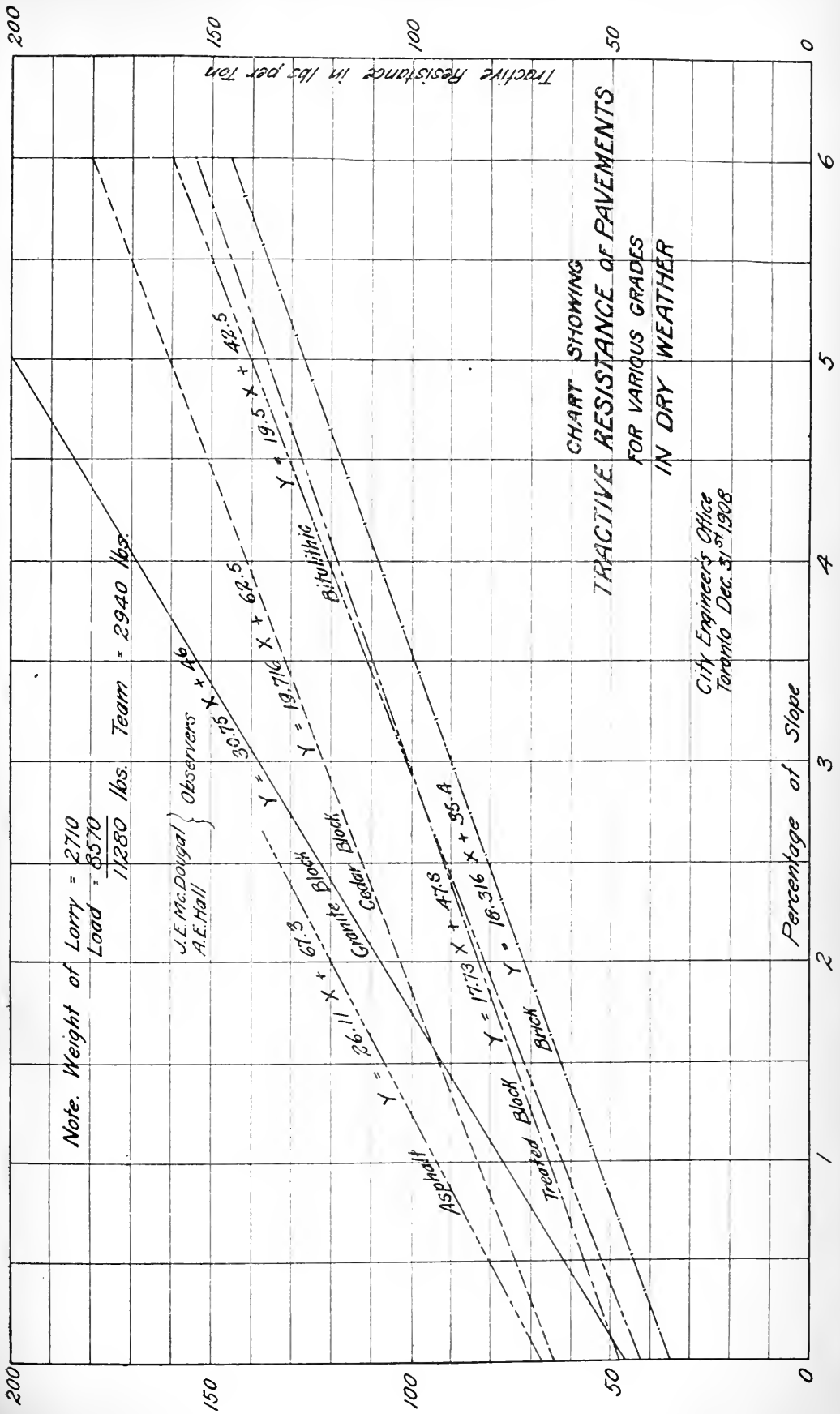
TOP VIEW OF APPARATUS

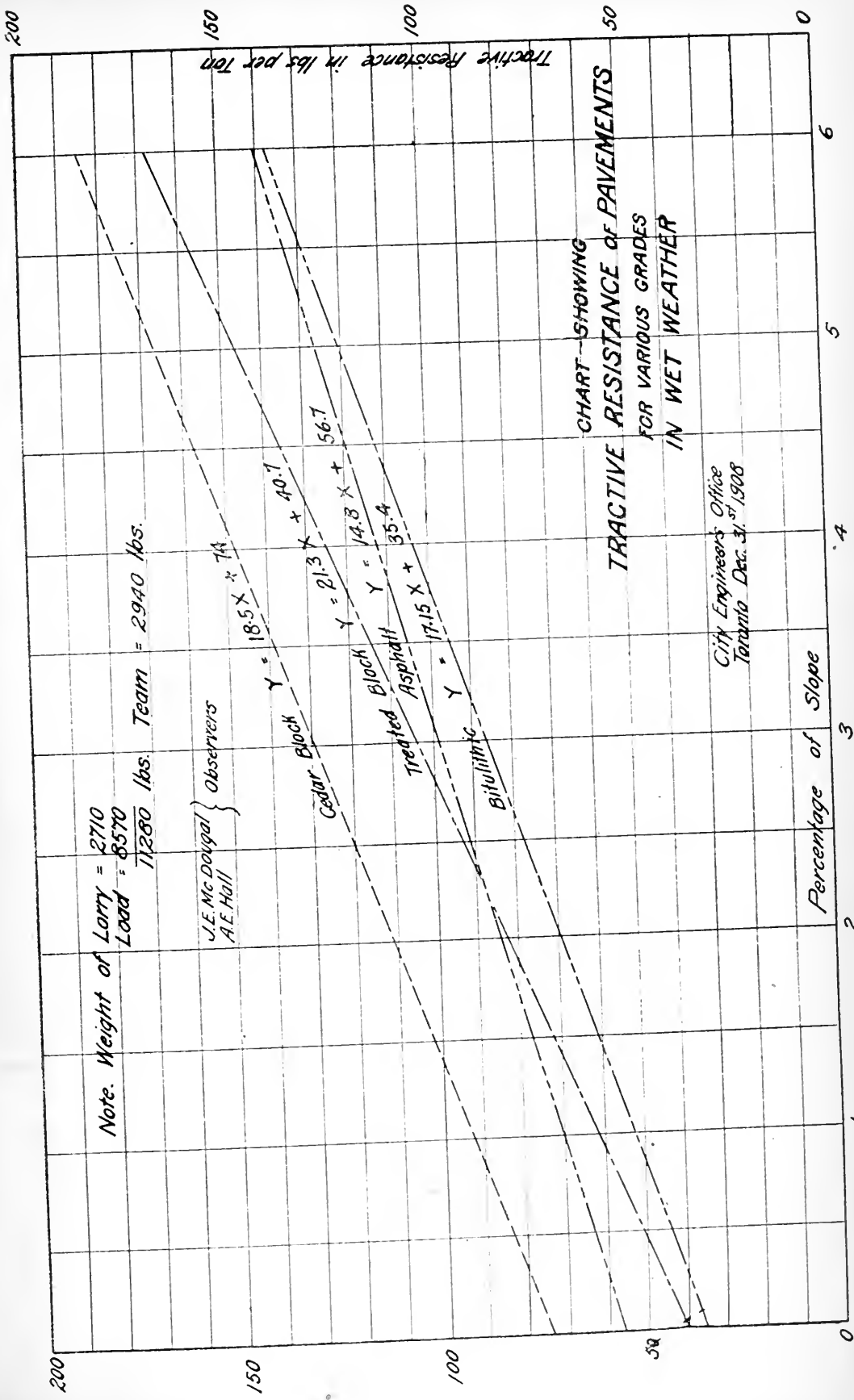


SIDE VIEW OF APPARATUS



GENERAL VIEW—TRACTION EXPERIMENTS





As already explained, when petitions, sufficiently signed, are received asking for this class of pavement, the Department, according to instructions from the Committee on Works, recommends the pavement, and the asphalt and other contractors claim that they should have the same privilege.

During the year there was constructed a total mileage of 5.326 miles of this pavement laid. The total yardage laid was 80,539 square yards.

The agents for the various paving companies are a source of great annoyance to the citizens, by whom they are importuned to sign petitions for the particular pavement they represent, and in a great many cases the same parties sign petitions for two or three different kinds of roadway. I would suggest that no petitions should be sent out of the office, but that the Engineer should make what recommendations he thinks advisable.

ASPHALT BLOCK PAVEMENT.

During the past year 0.546 miles were laid, representing a yardage of 9,469 square yards.

The majority of the blocks used were three-inch. I do not think, however, that any less than four-inch blocks should be used on heavily travelled streets. More of this material would probably be used if it were not for the fact that sheet asphalt is so much cheaper.

BRICK PAVEMENT.

During the year about 30,748 square yards of this material was used.

Brick makes a very durable pavement, and I regret that it is not more extensively used, but there is so much opposition to this class of pavement owing to the alleged noise created by wheeled traffic.

MACADAM ROADWAYS.

Only about 12,000 square yards of this material were used, and some of our old macadam pavements have been torn up and replaced with a material of a more permanent character.

At the latter end of the season Queen Street Avenue was re-surfaced with macadam, and Tarvia was used on the surface. The amount of Tarvia used per square yard was three-quarters to one and a quarter gal-

lons, and the cost of same was six cents per gallon. If this turns out to be satisfactory, I would recommend that all the macadam streets be treated by this or some similar method.

CONCRETE PAVEMENTS.

During the year eight concrete pavements were constructed and in all but one instance this pavement was used in lanes. This class of pavement has given excellent satisfaction, but has not as yet been used on streets with very heavy traffic. The first cost is also considerably less than that of any other permanent pavement, with the possible exception of asphalt.

TRACK ALLOWANCE CONSTRUCTION AND RECONSTRUCTION.

There were completed during the year 0.204 miles of new granite block track allowance, and 8.280 miles of track allowance reconstructed. This reconstruction, however, is largely of a temporary nature, but it is a vast improvement on the previous condition of the tracks.

Since 1906, when the renewal of worn out track allowances was commenced on a permanent basis, 20.769 miles of work has been completed, and it is the intention during the coming season to carry out a thorough repair of such pavements as are in a bad condition. In the case of new track work it is the intention to change the cross section of the foundation by making it a uniform depth of 12 inches.

During the past year the sum of \$167,086.87 was spent in repairing the pavement between the tracks of The Toronto Railway Company, and there is still a great deal of this work to be carried out. With the approval of the Board of Control, where any new tracks have been laid, the City have put down a concrete foundation under the whole track allowance, with the result that the pavements constructed in this manner are standing very well under the traffic. It is to be regretted that this method was not adopted when the franchise was granted to the Company in 1892, as considerable saving would have been effected.

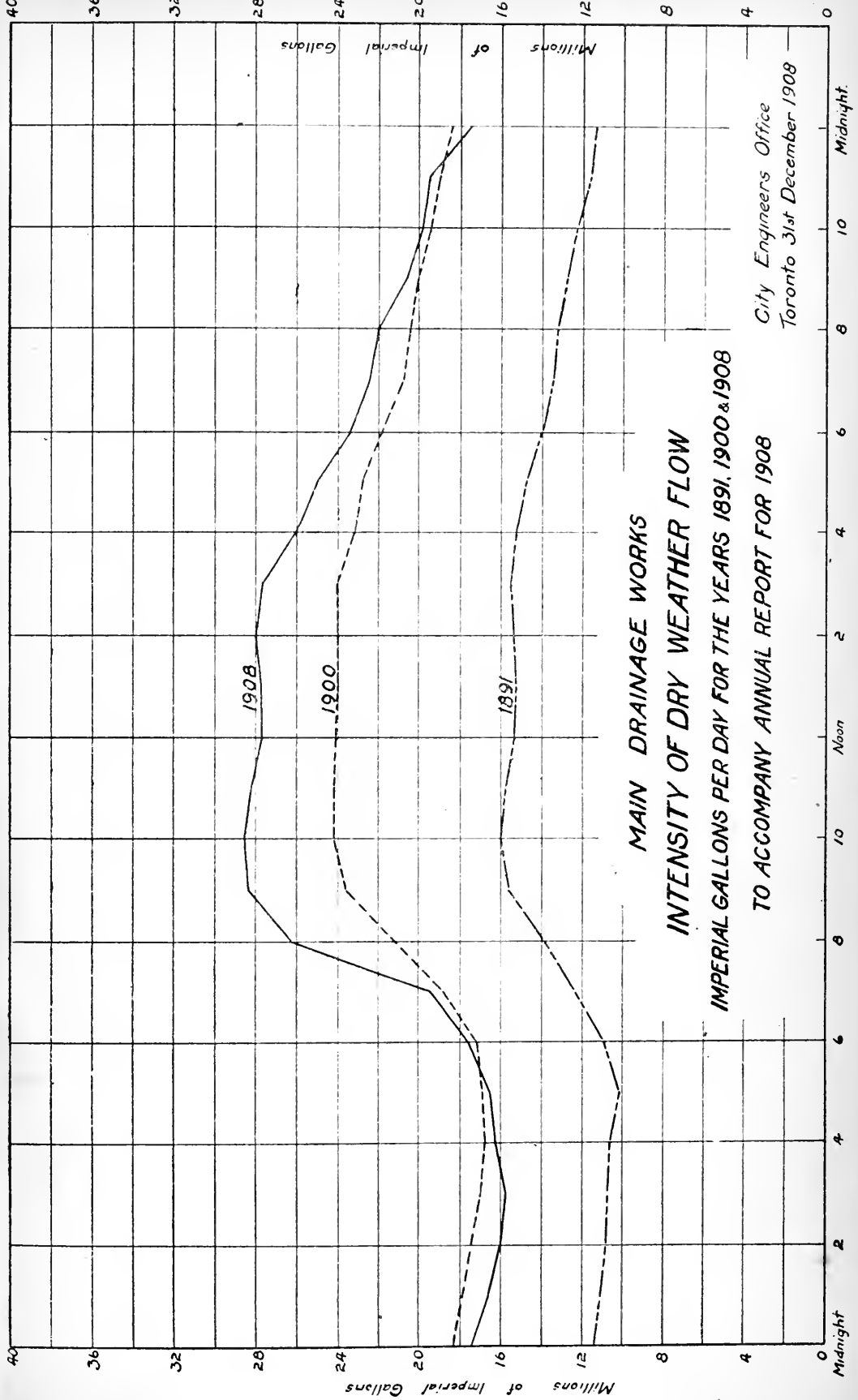
CONCRETE SIDEWALKS.

The total mileage of concrete sidewalks laid during the year was 55.101.

The guarantee period was reduced from five years to eighteen months. The result of this change is that more contractors tendered on sidewalks this year than formerly, and the prices, owing to this reduc-



WEIR GAUGING, ROSEDALE CREEK SEWER



MAIN DRAINAGE WORKS
INTENSITY OF DRY WEATHER FLOW
IMPERIAL GALLONS PER DAY FOR THE YEARS 1891, 1900 & 1908
TO ACCOMPANY ANNUAL REPORT FOR 1908

City Engineers Office
Toronto 31st December 1908

tion of the guaranteed period, were considerably less. The total length of concrete walks in the City is now 340.919 miles.

SNOW CLEANING.

The practice of clearing snow from opposite vacant lots was carried out, and the cost of the work was \$9,494.32, most of which was assessed against properties abutting upon the walks cleaned, the rate being 4 4-10 mills per foot for each removal. This rate is higher by 1 4-10 mills than the rate for the winter of 1906-7, which was caused largely by the class of men employed in this work, a number of them being new, arrived immigrants who were not able to do as much work as our regular men.

For further information, I refer you to the report of the Assistant Engineer in charge of the Roadway Department.

SEWERS.

During the year a total of 9.19 miles of sewers of various descriptions were constructed. This makes a total mileage of sewers in the City of 275.01.

During the summer of 1907 the York County Loan Company applied for a system of sewerage for the large stretch of residential property controlled by them lying west of Roncevalles Avenue. Upon the recommendation of this department the work was carried out by day labor and the work was done very much below the estimated cost.

WOODBINE SEWERAGE SYSTEM.

During the year it was found advisable to construct two sedimentation basins in this district for the purpose of intercepting the sand, which was not only injuring the pumps, but filling up the septic tanks.

These basins are answering the purpose for which they were constructed, in a satisfactory manner.

For further information in connection with this branch of the department, I would refer you to the report of the Assistant Engineer in charge of the work.

MAIN DRAINAGE AND OTHER SPECIAL WORKS.

This department had charge of the Main Drainage Works, plans and estimates in connection with the Track Elevation and the Sea Wall along the Lake Shore, west of the Old Fort.

The Main Drainage branch of the department was instituted as soon as possible after the By-law for the sum of \$2,400,000 was approved of by the ratepayers in July, and a general consideration of the whole scheme has been carefully gone into.

The plans of the intercepting sewers follow closely the lines laid down by Messrs. Hering and Grey in 1889, and plans for that section of the high level interceptor sewer lying between Jarvis Street and the Don were prepared and tenders called for on December 15th. The section of the sewers for which tenders were called provided for mass concrete throughout, but at the request of the bricklayers and brick-makers, the tenders were changed so as to allow for alternative bids, and the work was postponed until the beginning of the new year.

Gaugings were made during the months of October, November and December of all the main sewers. Previous gaugings were made in 1891 and 1900. The dry weather flow in 1891 was about 75 gallons, in 1900, 109 gallons, and in 1908, 73 gallons per head per day. The higher results obtained in 1900 were no doubt owing to the time of the year in which the gaugings were made and the presence of a great deal of sub-soil water in the sewers. It was also noticed that the fluctuation between midnight and noon is much greater in 1908 than in other years, and a table is attached to the report of the Assistant Engineer in charge of this work, showing the result of the gaugings of the various sewers.

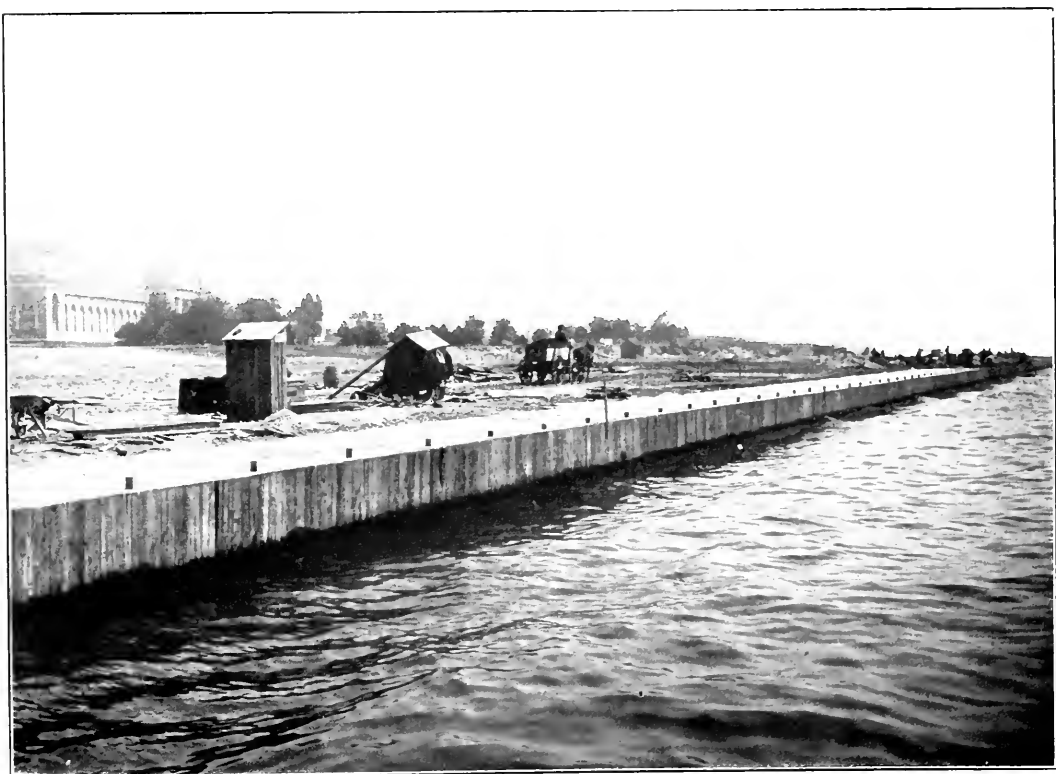
The Council, after a great deal of discussion, finally purchased fifty acres of land, lying south of Queen Street, between Morley Avenue and the Woodbine, for the erection of the necessary disposal works. This purchase has since been so strenuously opposed by the residents in the neighborhood and also by those living in the newly annexed territory of East Toronto, that I have recommended that the professional opinion of Mr. Rudolph Hering, of New York, and Mr. John D. Watson, of Birmingham, England, should be obtained before the construction is proceeded with. In the meantime the staff are proceeding with the preparation of the plans for the remaining sections, and I trust the work will be commenced early in the Spring of next year.

ELIMINATION OF GRADE CROSSINGS.

The question of eliminating grade crossings along the Esplanade has been prominently before the public for the past two or three years, and during 1907 and 1908 the matter was heard before the Board of Railway Commissioners for Canada upon an application from the City Mr. Isham Randolph, of Chicago, Mr. W. F. Tye, of Montreal, and Mr.



GENERAL VIEW LOOKING WEST



SEA WALL

F. L. Sommerville, of Toronto, were retained by the City as advisory engineers.

At the request of the Board of Railway Commissioners for Canada, plans were prepared in this office for the elevation of the tracks running along the Esplanade, between Logan Avenue, crossing the G. T. R. tracks, the Queen Street crossing of the C. P. R. and C. N. O. and Bathurst Street. The preparation of details, supplementary estimates, etc., required by the Board of Railway Commissioners, added considerably to the work of this department.

1. 2000
On the 31st of December a draft order was made by the Board of Railway Commissioners ordering the Railway Companies to elevate four tracks along the water front between York and Cherry Streets.

The abolition of the crossings west of Dufferin Street to the Humber has not yet been decided, but the Board of Railway Commissioners propose to deal with this matter early in the coming year.

The Railway Companies opposed the elevation of the tracks, and recommended the construction of bridges for the carrying of vehicular and pedestrian traffic over the railway tracks. These bridges were planned by the Railway Companies to commence at or near Front Street, and, after crossing the tracks, descending towards the Bay on obtainable grades. In view of the manifest injury to lake borne traffic, and to the objection of bridges, this department made a series of experiments to show the result of tractive effort to loads on various grades, and the results of the tests, which are well worthy of perusal, are fully given in the report of the Assistant Engineer. It was ascertained that the brick pavement gave the best results.

SEA WALL.

The Sea Wall in front of the Exhibition Grounds is now completed. In the early part of the season the progress was slow, owing to the inclement weather and the exposed position, but during the summer the work progressed much more favorably. 163 cribs were placed, giving a total of 2,714 feet.

The filling behind the wall, which is now in progress, is composed of street cleanings and garbage, topped with earth, a great deal of which was hauled from the Lansdowne Avenue Subway, the contractors being paid for overhaul.

SEA WALL BETWEEN INDIAN ROAD AND THE HUMBER RIVER.

This work was commenced on the 16th of September. The form of construction adopted by the Council was an alternative design submitted by the Park Commissioner, calling for stone-filled cribs resting on sand, gravel and boulders, and surmounted by a mass concrete wall.

Two lines of timber crib-work, at right angles to the shore, and three cribs of forty-two feet in length, were placed in position when the work was stopped for the season. The balance of the cribs are now completed at the contractor's yard, and will be ready to be placed in position as soon as the weather permits. Although no observations respecting the stability of the wall are yet possible, I do not think this type of wall should be used in future extensions.

REPAIRS AND MAINTENANCE OF BRIDGES, WHARVES, ETC.

The usual repairs to bridges and wharves have been undertaken. During the past year a new steel foot bridge was erected to take the place of the old wooden bridge crossing the Don, north of Gerrard Street. This bridge was constructed by the Dickson Bros., of Campbellford, Ont., the contract price being \$3,421.

A small concrete culvert was constructed on Poplar Plains Road at the creek crossing just north of the C. P. R. tracks.

Winchester Street Bridge.—This bridge is in a very dangerous condition and will have to be replaced either by a new steel bridge or a new superstructure constructed.

LANDSDOWNE AVENUE SUBWAY.

The most important work carried out by this branch of the department during the year was the Lansdowne Avenue Subway. The contract for the substructure was awarded to the Godson Contracting Company, of this City, which company completed the concrete work, and also did a great deal of excavating. The contractors for the superstructure were the Cleveland Bridge & Engineering Company, of Darlington, England, the contract price being \$53,443.38. This work should be completed early in the coming year, and will afford a much needed thoroughfare in the north-west part of the City.

PUBLIC CONVENIENCES.

The lavatory at the intersection of Toronto and Adelaide Streets was practically rebuilt, and a woman's lavatory constructed adjoining the men's lavatory on Cottingham Street, the cost of which was \$5,243.

The number of persons using these conveniences during the year is as follows:—

Yonge and Cottingham Streets	97,973
Queen Street and Spadina Avenue	579,085
Toronto and Adelaide Streets	203,965
Women's lavatory, Cottingham Street	2,511

For further information I refer you to the report of the Assistant Engineer in charge of this branch of the department.

STAFF.

I beg to call the attention of your Council to the absolute necessity of more office and vault accommodation. The work has increased so rapidly that it has been necessary to add to the staff, and consequently the present office space is quite inadequate for the proper and economical carrying out of the work, and as a result members of this department have rooms in different parts of the City Hall.

I understand the School Board have been considering the advisability of vacating their present quarters. The rooms now occupied by that Board would be admirably adapted for the use of this department.

The members of the staff have, during the year, performed their duties in a most satisfactory manner, and I trust your Council will take into consideration the granting of substantial increases to some of the assistants, who are very inadequately paid. The saving during the past two or three years by this office in works carried out by day labor equals the total salaries paid, and I consider that the officials who have so efficiently carried out these works, deserve some consideration.

Respectfully submitted,

C. H. RUST,
*City Engineer, and Chief Engineer
 and Manager of the Water-Works.*

Report of Deputy City Engineer and Assistant Engineer in Charge of Water Works

CITY ENGINEER'S DEPARTMENT,
Toronto, December 31st, 1908.

MR. C. H. RUST,
City Engineer.

DEAR SIR,—I herewith submit the Annual Report of this Department for the year ending December 31st, 1908.

DISTRIBUTION.

94,289 feet of mains have been laid during the year, consisting of

23,972 feet of 20-inch Cast Iron Main.

5,158 $\frac{3}{4}$	"	16	"	"
10,737 $\frac{1}{2}$	"	12	"	"
1,069	"	8	"	"
53,492 $\frac{3}{4}$	"	6	"	"
2,859	"	4	"	"

97,289 feet.

At the end of the year the total length of mains in use was 323,743 miles.

STOP VALVES.

The number of stop valves placed in position is as follows:—

1	—	24-inch stop valve.
30	—	20 " "
9	—	16 " "
37	—	12 " "
4	—	8 " "
179	—	6 " "
9	—	4 " "

There were taken out during the year one 12-inch and one 9 inch stop valves, making a total of 3,091 stop valves.

There are 73 check valves in position.

HYDRANTS.

Fire hydrants to the number of one hundred and eighty-two have been placed on the streets during the year, consisting of one hundred and twenty 3-way and sixty-two 2-way hydrants.

In addition forty-one 2-way hydrants have been replaced by 3-way hydrants.

Six 4-way hydrants were placed at the Dominion Radiator Company's works, one 2-way hydrant at the Asphalt Plant, Princess Street Yard, and two 3-way at the Sunnyside Orphanage.

Ten 2-way hydrants were removed from off the streets, leaving a total of 3,725 hydrants in use.

HOUSE SERVICES.

The total number of services laid this year was 3,641.

LEAKS ON MAINS.

12 on 36-inch mains.				
3	"	30	"	"
8	"	24	"	"
—	"	20	"	"
—	"	16	"	"
74	"	12	"	"
2	"	10	"	"
4	"	8	"	"
104	"	6	"	"
9	"	4	"	"
1	"	3	"	"

217 of all sizes.

The cost of repairing, exclusive of repairs to asphalt pavement, was \$2,267.42, including material used, or an average cost of \$10.41 per leak.

The average number of leaks per mile of distribution is 0.669, and the average cost per mile \$6.99.

STORE HOUSE.

The stock on hand has been kept up, and that on hand at the end of the year checked and found correct.

STABLES.

The cost of this branch for the year, including feed, veterinary surgeon, repairs to wagons, harness, sleighs, etc., was \$8,110.48.

METER AND MACHINE SHOP.

General repairs have been made for the following Departments:—City Treasurer's, Engineer's, City Hall Boiler Room, Conduit, Public Conveniences, Park Commissioner, Fountains, House Services, High Pressure System, St. Lawrence Market, Island Fire Protection, Island Water Works, Weed Cutter, Main Pumping Station, Island Pumping Station, High Level Pumping Station, Sand Pumps Nos. 1, 2 and 3, Reservoir Grounds, Roadway Department, Sewer Department, Special Surveys, Tug "National" and New Tunnel.

The total number of meters in use	2,768
Number of meters rebuilt in shop	334
Number of meters inspected and repaired without removal	1,528
Number of meters taken off for repairs and replaced	368
New meter takers	259
Meters ordered off	78
Total value of meters in service	\$144,969.25
Valves placed on Island in spring and removed in fall.....	51
Number of drinking taps placed on Island	21
Number of drinking fountains in use	66
Combination fountains in use	15

HYDRANT AND VALVE DEPARTMENT.

Hydrants inspected	25,871
Pumped, packed and oiled	1,572
Fired, thawed or fired, blown out, pumped, packed and oiled	956
Repaired on street	181
Painted on street	880
Fountains painted on street	42
High pressure hydrants repaired on street	4
High pressure hydrants examined on street	303
High pressure hydrants painted on street	75
Tightened with bar and chain	19
Set in line	37
Jackets cut	9
Crowns chipped	8
Dies run on nozzles	2
Caps loosened and oiled	272
Mains blown out	146
High pressure mains blown out	12

MATERIAL USED.

New joint rings	193
“ chain rings	310
“ valves	116
“ wedges	1
“ screws	7
“ nozzles	7
“ cap leather	653
Nozzles caulked	1,317
Chain rings closed	349
New caps	21
Repaired caps	25
New grummets	1
“ valve washers	3
Leather valves built in shop	169
New packing rings	61
“ brass shackles	2
“ 4-way spindles (small)	?
“ 4-way spindles (main)	2

VALVES TESTED IN SHOP.

20-in.	12-in.	8 in.	6-in.	4-in.	3-in.	
14	58	11	198	1	31	
2-in.	1½-in.	1¼-in.	1-in.	¾-in.	½-in.	Total
112	6	6	47	14	86	584

HYDRANTS REPLACED ON STREET.

2-ways with 2 ways.	3-ways with 2-ways.	3-ways with 3-ways.	
64	39	8	
2-ways with 3-ways.		Total	
3		114	

NEW HYDRANTS PLACED.

2-ways.	3-ways.	4-ways.
6	121	5

HYDRANTS REMOVED ON STREET AND PLUGGED.

2-ways.
1.

HYDRANTS TESTED IN SHOP.

2-ways.	3-ways.	4-ways.
141	184	5

HYDRANTS REBUILT IN SHOP.

2-ways.
76

3-ways.
47

MAINS CHARGED.

All new 16" and 20" mains and extensions were charged by this Department.

Fence, e.s. Yonge, Severn to Roxboro', painted.

" and rail at Reservoir Grounds painted.

Hydrants rebuilt in shop 123

MATERIAL USED.

Packing rings	61
Tee valves	82
Sludge valves	67
New screws	10
" nozzles	138
" brass shackles	2
Extension pieces	39
Packing, nuts	25
1½ pr. I. washers	48
Valves inspected on street	867
Packed and oiled	14
Repaired on street	36
New valve screws	26
" iron tops	15
" gland bolts	30
" valve seats	1
" packing rings	6
" rubber joints	7
" tops	11
" set screws	17
" domes	1
" spindles	1
" bolts	9
" small relief valves	3
" large valves	4
Centre valve chamber tops	2
Elbows tested in shop	21
Brasswork tested in shop, pcs.	8,876
5" x 1½ x 1½ D. cocks	779
5" x ¾ " "	207
5" couplings	286
¾ S. cocks	346

$\frac{1}{2}$ S. cocks	1,199
$\frac{1}{2}$ S. nipples	754
$\frac{3}{4}$ S. cocks	73
$\frac{1}{2}$ couplings	2,276
$\frac{5}{8}$ S. cocks	540
$\frac{5}{8}$ D. nipples	1,221
$\frac{5}{8}$ S. "	534
$\frac{3}{4}$ S. "	60
$\frac{3}{4}$ couplings	219
$\frac{1}{2}$ S. nipples	3
$\frac{3}{4}$ S. "	379

SMITH SHOP.

New drills	33
" caulking tools	29
" Pike pole hooks	13
" wedges	6
" tan pins	16
" cap rings	25
" hooks	109
" pr. hinges	4
" I. handles	20
" chain rings	200
" straps	15
" box wrenches	3
" spindles	2
" hangers	8
" chain	1
" picket shoes	6
" chisels	97
" forgings	18
" yarn irons	6
" eye bolts	36
" pr. tongs	1
" stop cock keys	17
" valve keys	24
" prong keys	1
" bolts	177
" crowbars	33
" rakes	2
" iron ladders	3
" spikes	363
" clamps	41
" steel keys	7
" spanners	14
" boiler tools	31

New bursting wedges	8
" tube cleaners	1
" steel plates	5
" nuts	5
" iron frames	2
" brackets	23
" steel screw-drivers	16
" iron rings	35
" pipe flanges	18
" catches and keys	24
Boiler tools repaired	355
Mudhole bolts repaired	56
Picks sharpened	559
" laid and steel	71
Chisels sharpened	486
Reamers forged	13
Tunneling bars repaired	322
Drills sharpened	80
Prs. lathes repaired	4
Valve keys repaired	6
Coal cart repaired	2
½ rods (service)	205
Rods (service)	4,156

RESERVOIR.

The average depth of water in the Reservoir for the year was 16 ft. 7 in., equal to an elevation of 212 ft. 7 in. above zero level of Lake Ontario, and containing 24,470,821 gallons.

The lowest elevation of water was 203 feet 7 in. above zero on 12th of September; the highest 216 ft. 10 in. on 2nd and 10th of November.

The Reservoir could not be spared for cleaning again this year owing to the difficulty of keeping up the supply of water and pressure in the mains.

TEMPERATURE OF WATER.

The average temperature for the year taken at the City Hall tap was 44.58 degrees Fahrenheit.

The highest temperature, 64 degrees Fahrenheit, on the 21st of September, and the lowest, 35 degrees Fahrenheit, on the 21st of March

HIGH LEVEL PUMPING STATION.

1,864,775,991 gallons of water were repumped during the year, the daily average being 5,108,975 gallons. The cost of running the station, including repairs, etc., was \$17,311.75.

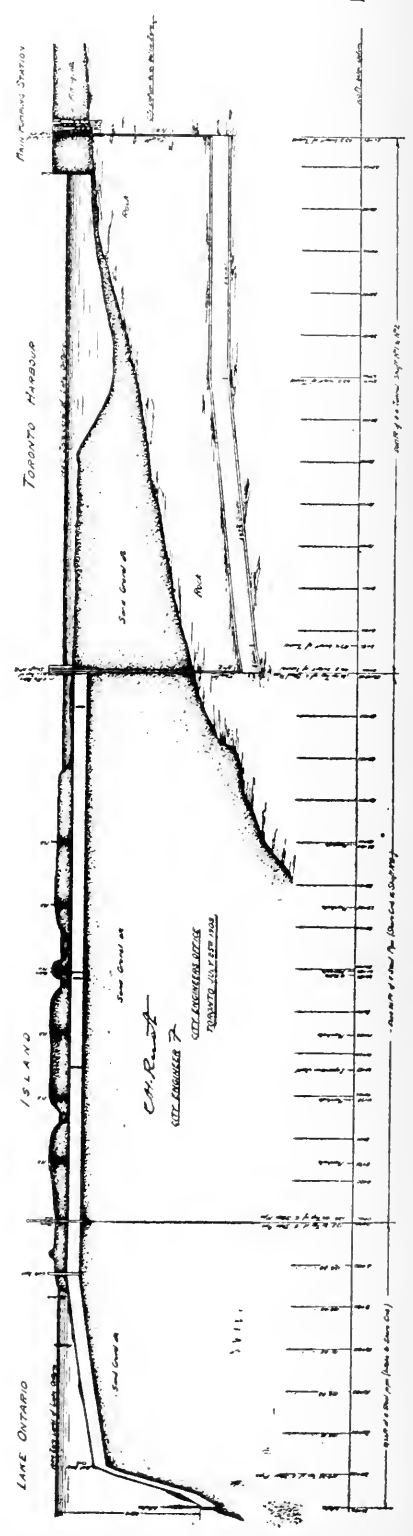
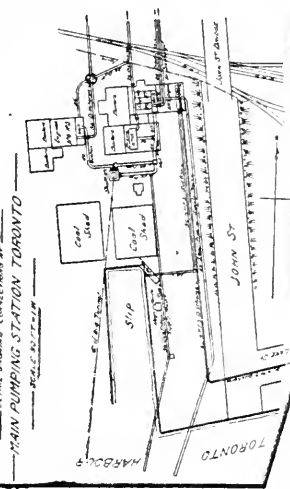
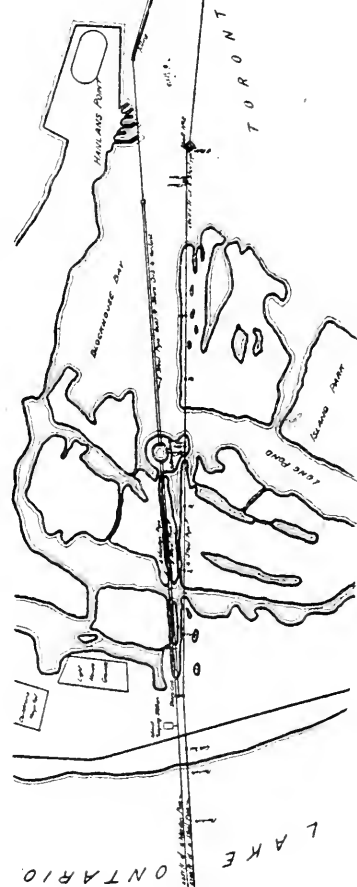
T. W. W.

PLAN SHOWING

CONDUITS FROM INTAKE TO MAIN PUMPING STATION.

PROFILE ON LINE OF 60" STEEL CONDUIT & TUNNEL

SCALE (HORIZONTAL 400 FT = 1 IN VERTICAL 80 FT = 1 IN)



Scale of 1 in = 100 ft

Scale of 1 in = 80 ft



The contractor for Engine No. 3, the new six million gallon, has completed the construction and erection of same. The contract for this engine was signed on May 30th, 1905, and the time allowed for its construction, including extensions, eighteen months.

The engine has not, as yet, been taken over by the City, although it has been in service since the 1st of December, 1908, the contractor not being ready for the official test.

A contract has also been made this year with the John Inglis Company, of this City, for the construction and erection of a duplicate six-million triple expansion pumping engine. Progress on this engine has been satisfactory.

The completion of the first six-million gallon engine has enabled the Department to overhaul one of the smaller engines, of which there are two of 3,000,000 capacity each. These engines were erected in 1890, since when practically no opportunity has occurred to permit of their being thoroughly overhauled, all minor repairs being made at night whilst the engines were shut down.

MAIN PUMPING STATION.

10,620,424,930 gallons of water were pumped during the year; of this quantity

	Gallons.
Nos. 1 and 2 engines pumped	327,493,447
Nos. 4 and 5 engines pumped	5,388,321,032
No. 6 engine pumped	4,904,610,451
	<hr/>
	10,620,424,930
	<hr/>
This year's daily pumpage	29,097,054
Last year's daily pumpage	28,374,101
	<hr/>
Increase	722,953

The coal consumed during the year amounted to 15,785.575 tons.

The cost of running the station was:

For coal and cartage of ashes	\$49,226.46
For wages, oil, waste, repairs	56,094.39
	<hr/>
	\$105,320.85

ISLAND PUMPING STATION.

Pumping at this station began on the 27th day of April and lasted till the 1st of November.

The installation of the million-gallon pump has been of great assistance in keeping up the supply and pressure. Last year it was found impossible to do either with only the half million-gallon pump running.

TUNNEL.

The construction of the tunnel across the bay, a distance of 5,087 ft., marks the completion of the improvement proposed by Mr. E. H. Keating, City Engineer in 1895, and endorsed by Mr. Mansergh, of London, England, who was called in to advise the City as to what source should be adopted for increasing the water supply, the choice lying between a gravity supply from Lake Simcoe, 40 miles distant, or a supply pumped from Lake Ontario. From borings taken across the bay it was found that shale rock existed under the bay at a depth of 15 feet below zero at the Main Pumping Station grounds, and dipping to the south on a grade of about 1 ft. in 100, reaching a depth of 64½ ft. below zero at the South Tunnel Shaft.

The reasons that led to the adoption of the tunnel were: the difficulty and cost of laying 6-ft. pipe or larger across the bay at a depth that would not obstruct future deep water navigation, the expense of anchoring same so as to permit of its being safely emptied and examined for leaks, as well as the impossibility of keeping sewage out of it (the bottom of the bay being covered with from three to four feet of sewage) while laying, and the impossibility of thoroughly cleaning it if it could not be emptied. Estimates were made for both cast iron and steel pipe from the lake intake to the pumping station well, and also for a tunnel under the bay and a steel pipe from tunnel to lake intake as follows:—

Tunnel and steel pipe across Island to lake intake	\$525,000
6-ft. cast iron pipe from well to lake intake	560,000
6 -ft. steel pipe from well to intake	518,000

Between 1896 and 1898, 2,357 ft. of steel pipe was laid from Shore Crib to the intake. Nothing further was done till 1904, when a contract was let for 85 lengths of 6-ft. steel pipe and the laying of same, this completing the tunnel scheme from the intake to the south shaft of the proposed tunnel.



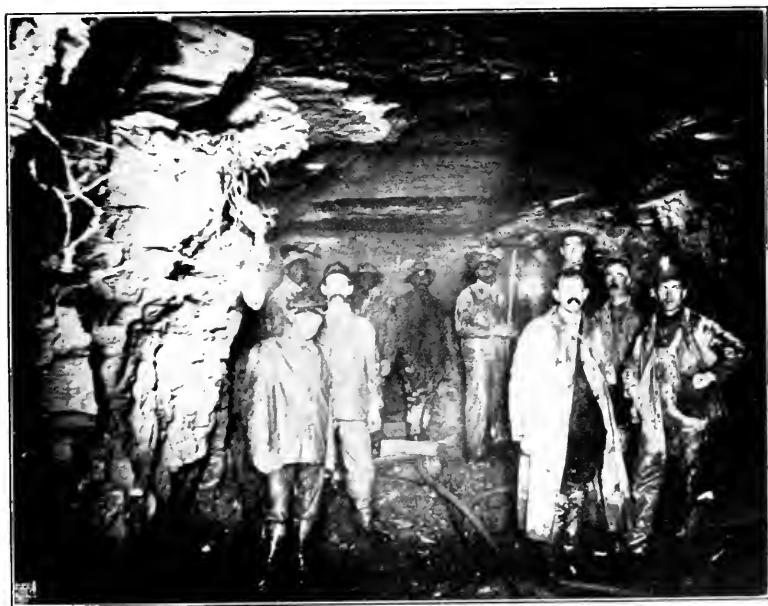
MEETING OF THE TWO HEADINGS



SHewing TIMBERING TUNNEL



BRICK ARCH

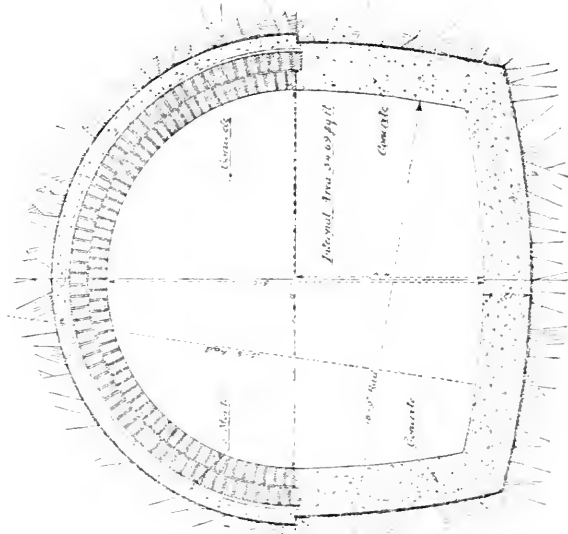


BLASTING GANG—TUNNEL

TUNNEL

FROM ISLAND TO MAIN PUMPING STATION

SCALE 1 INCH = 1 FOOT.



CROSS SECTION.

Chas. E. Ross

City Engineer

City Engineers Office

Toronto, Dec. 10, 1903

10-2-103

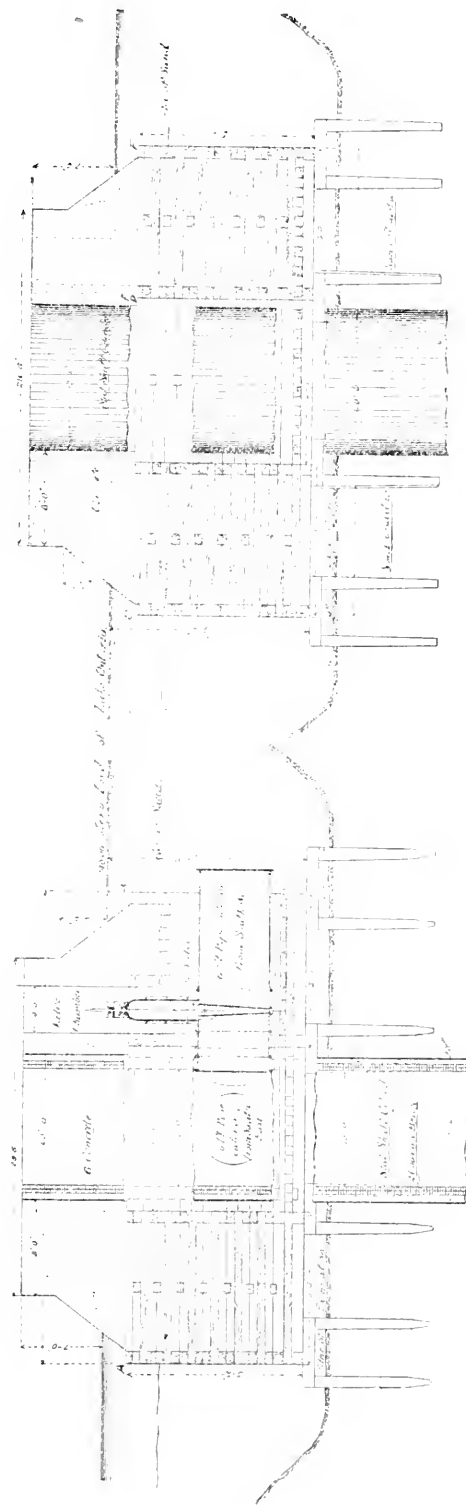
TORONTO WATER WORKS.

TUNNEL

FROM ISLAND TO MAIN PUMPING STATION

DETAIL OF CRIB, SOUTH OR NO. 2 SHAFT.

SCALE $\frac{1}{4}$ INCH = 1 FOOT.



No 5.

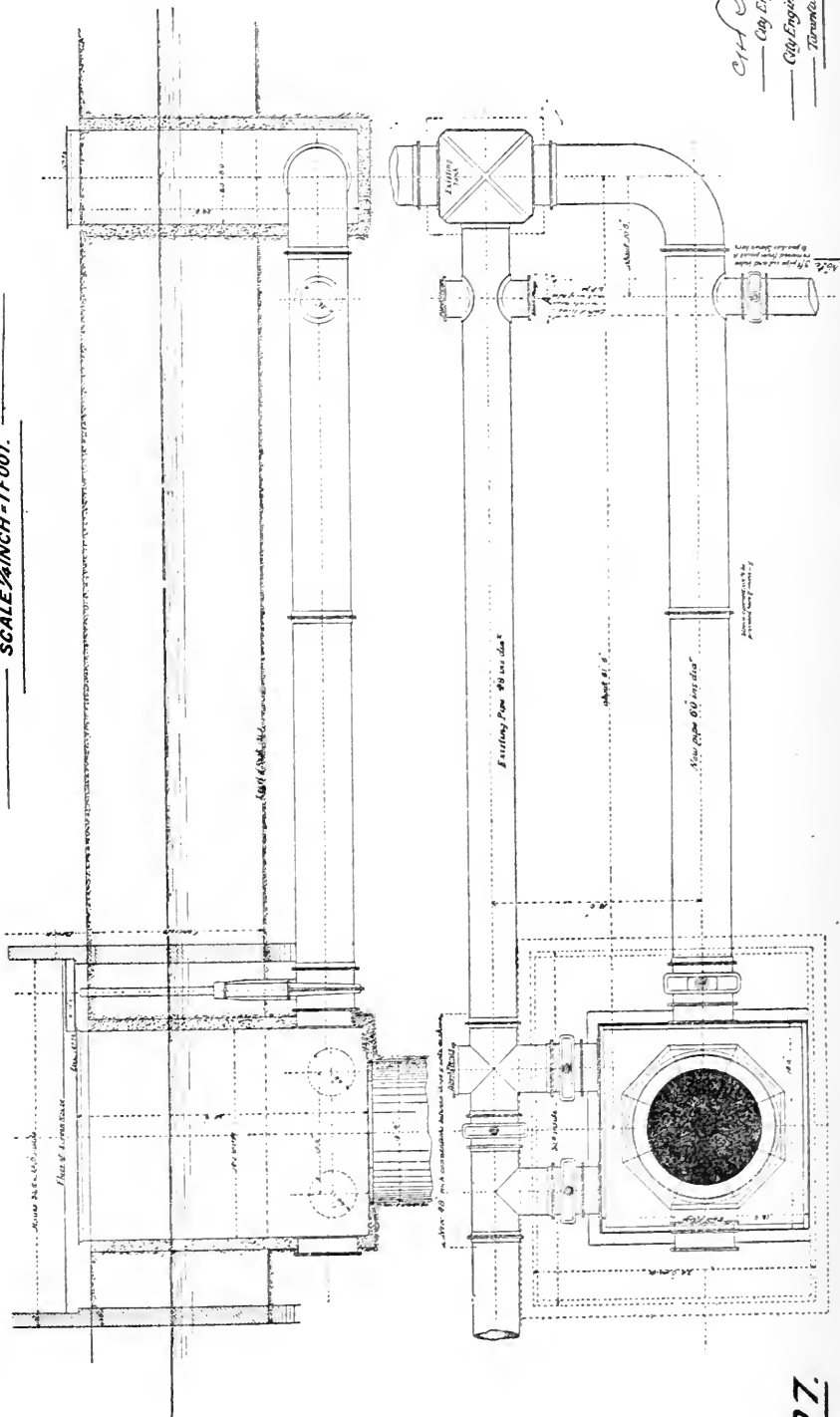
Cord Runt.

- - City Engineer: -

City Engineers Office

— *moderately* —





Chas. E. Rust
 City Engineer
 City Engineers Office
 Toronto, Ont., 10/10/05

204

204

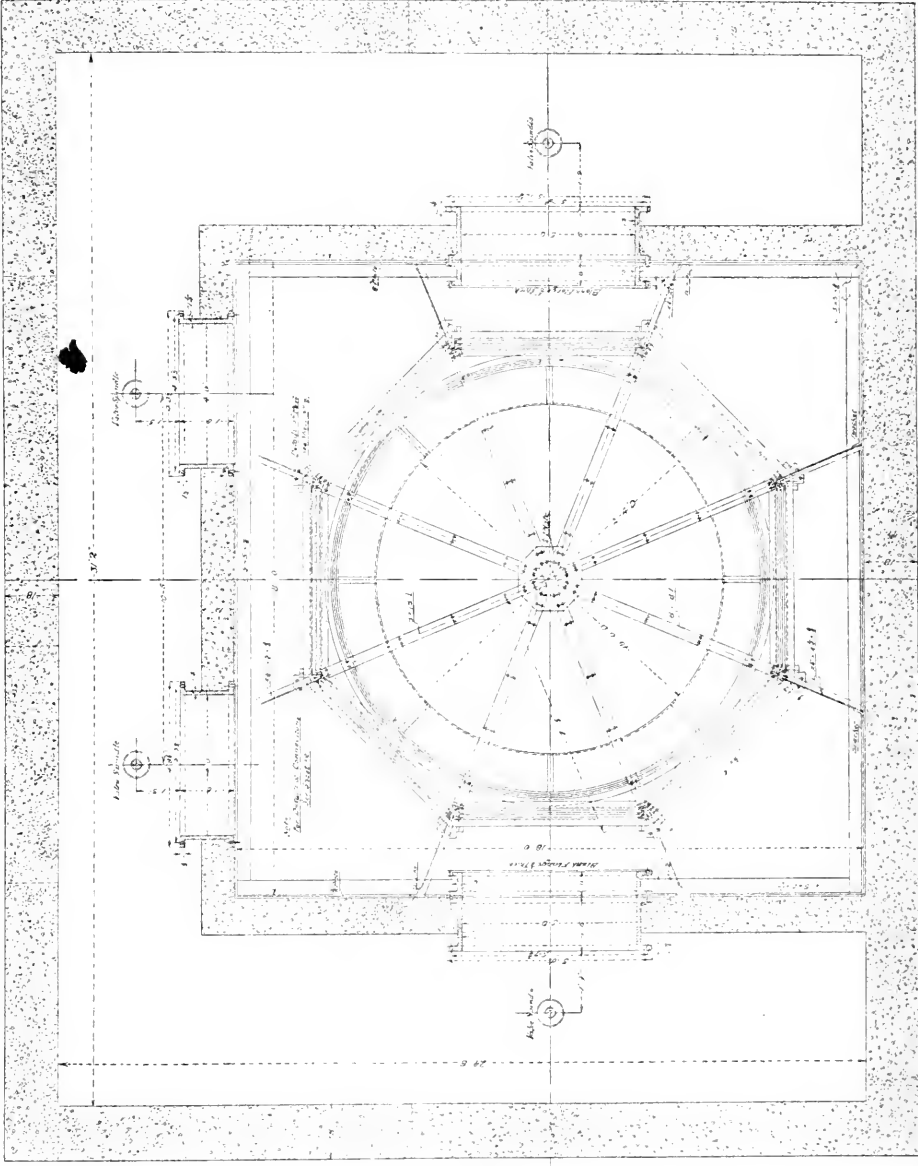
204



TORONTO WATER WORKS. TUNNEL FROM ISLAND TO MAIN PUMPING STATION

PLAN
OF
SCREEN CHAMBER
NORTH OR NO. 1 SHAFT.
SCALE 1/4 INCH = 1 FOOT.

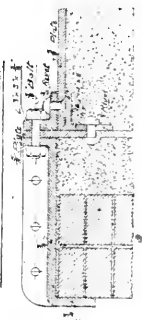
Ernest R. East
City Engineer
Toronto, Ont., 1900



NOTE -
The 60" diameter has 12 x 1/2" bolts
and 12" diameter has 12 x 1/2" bolts
The 48" connection has 12 x 1/2" bolts
and 12" diameter has 12 x 1/2" bolts

TUNNEL

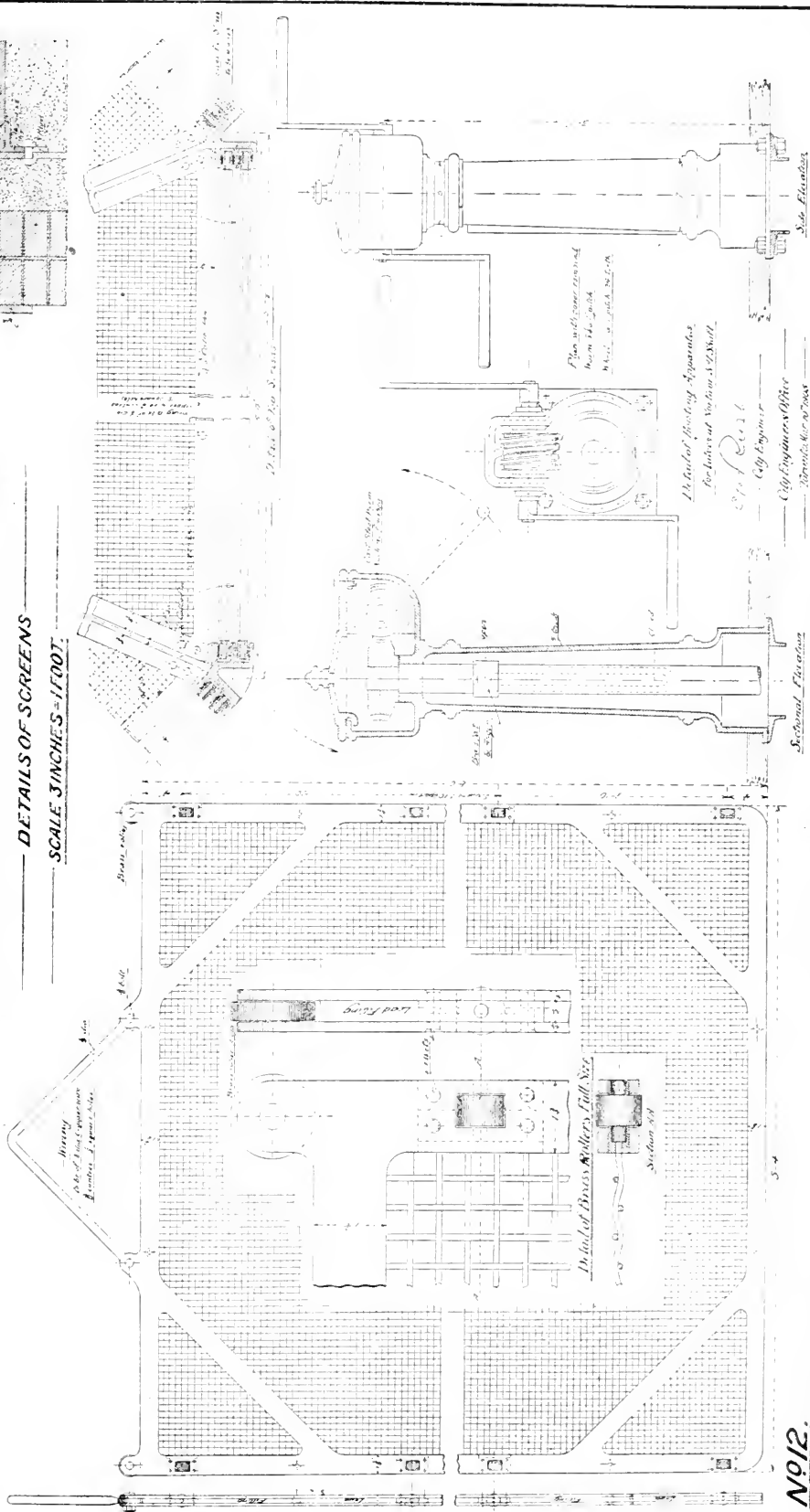
Detail of connection of base of Tank -



FROM ISLAND TO MAIN PUMPING STATION

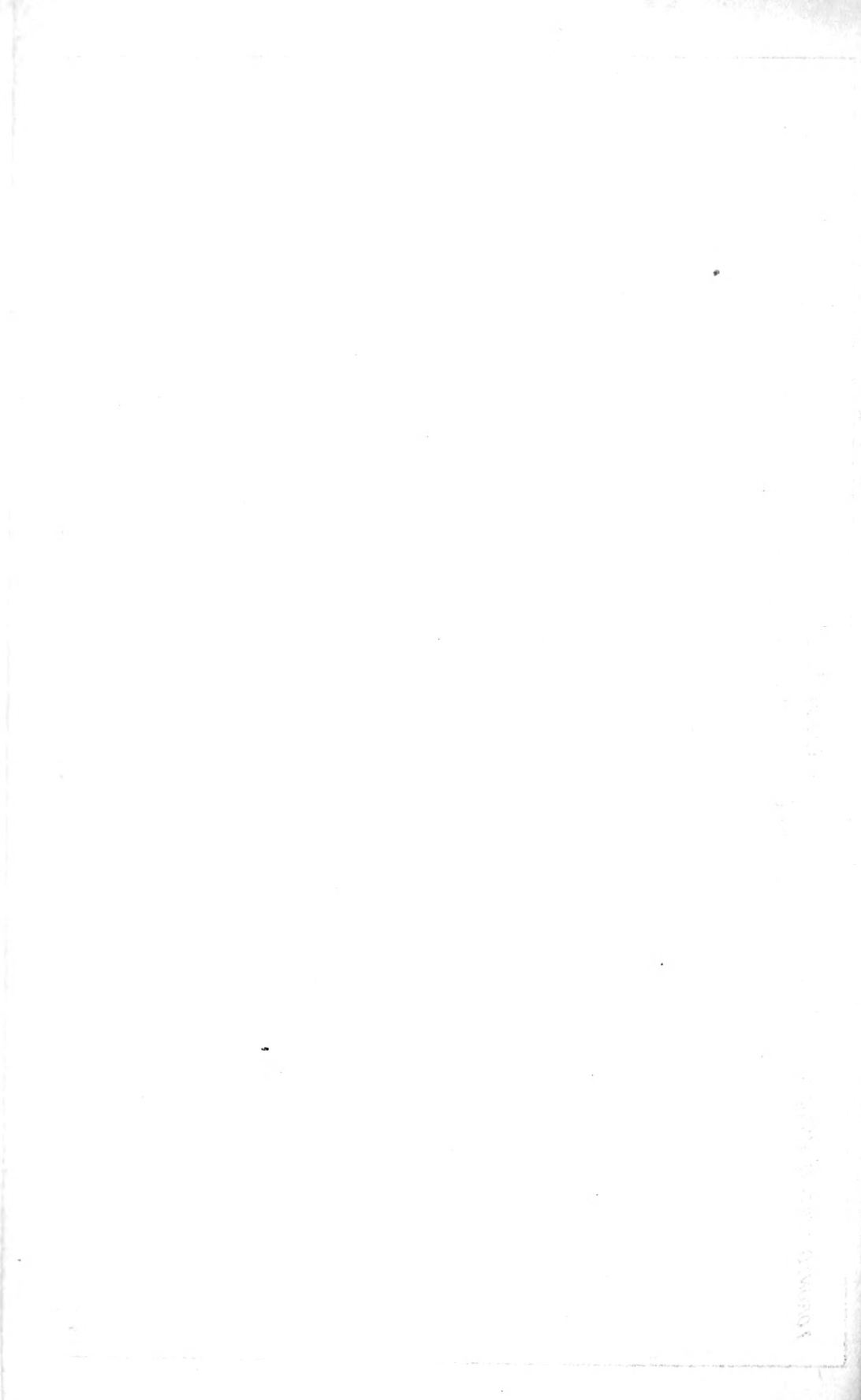
DETAILS OF SCREENS

SCALE 3 INCHES = 1 FOOT.



No 12.

100



In 1905 a contract was entered into with Messrs. Haney & Miller for the construction of a tunnel and connections under Toronto Bay, the contract price being \$269,000. Work was begun in October at the Island end, consisting of a dam around the shaft site and the erection of the necessary platforms and buildings for supplies and plant.

Active operations did not begin till Spring of 1906, and after the 12-ft. 4-in. shaft cylinders had been received. These shells were of steel 12 ft. 4 in. in diameter, $3\frac{1}{4}$ in. thick and 10 ft. in length, bolted together through flanges on the inside of shell.

An attempt was made to sink them by means of water jets and weights, the material being clammed from the inside of the shell. On reaching a depth of 40 ft. the caisson stuck; the contractor then resorted to dynamite, with the result that the two bottom sections had to be removed owing to the damage caused by a too heavy charge of dynamite being used, and the whole work of sinking the caisson had to be done over again. The next attempt proved successful, the caisson being carried about 5 ft. into the rock and sealed. During these operations the contractors had a boring machine designed and built with which they expected to bore the tunnel, the section having been changed from a horseshoe shape to a cylindrical shape to permit of this being done.

Unfortunately, owing to electrical difficulties, it failed to work satisfactorily, and as the contractor was limited as to time, he decided to have recourse to the ordinary method of tunnelling, the section of same reverting to a horseshoe having three rings of brick for the arch, the side walls and invert being of 1:2:4 concrete; the overbreak over the arch was dry packed except the haunches, which were laid in mortar. All below the arch was concreted to the rock.

Operations were carried on simultaneously from both shafts.

Work on tunnel started October 1st, 1907, at Island end, and about one month later at Main Station end, the headings meeting July 14th, 1908. The best month's work for a single heading being 345 ft., and for both headings 660 ft. Boring, mucking, and concreting were carried on at the same time; the brick work, however, was done at night.

The total quantity of leakage dealt with was 550,000 gallons in 24 hours. It was piped through the walls, the green work being protected by canvas screens and tar felt till the mortar had set. This seepage was found to be quite salty and to contain only a few harmless

varieties of bacteria. The pressure behind the brick work with all weepers closed was shown by a gage to be 15 to 17 lbs. per square inch. The head due to lake level is over 40 lbs. per square inch.

The attached tracings give a general idea of the plan of construction.

On the 30th December water was admitted to the tunnel, and on 1st January, 1909, at 5 o'clock, the pumps commenced taking their supply from same.

Provision has been made for two 6-ft. pipes connecting with the tunnel at south shaft when necessary, as the capacity of same is about 80 million gallons per day. The contractors deserve a great deal of praise for the manner in which they have pushed this work to completion.

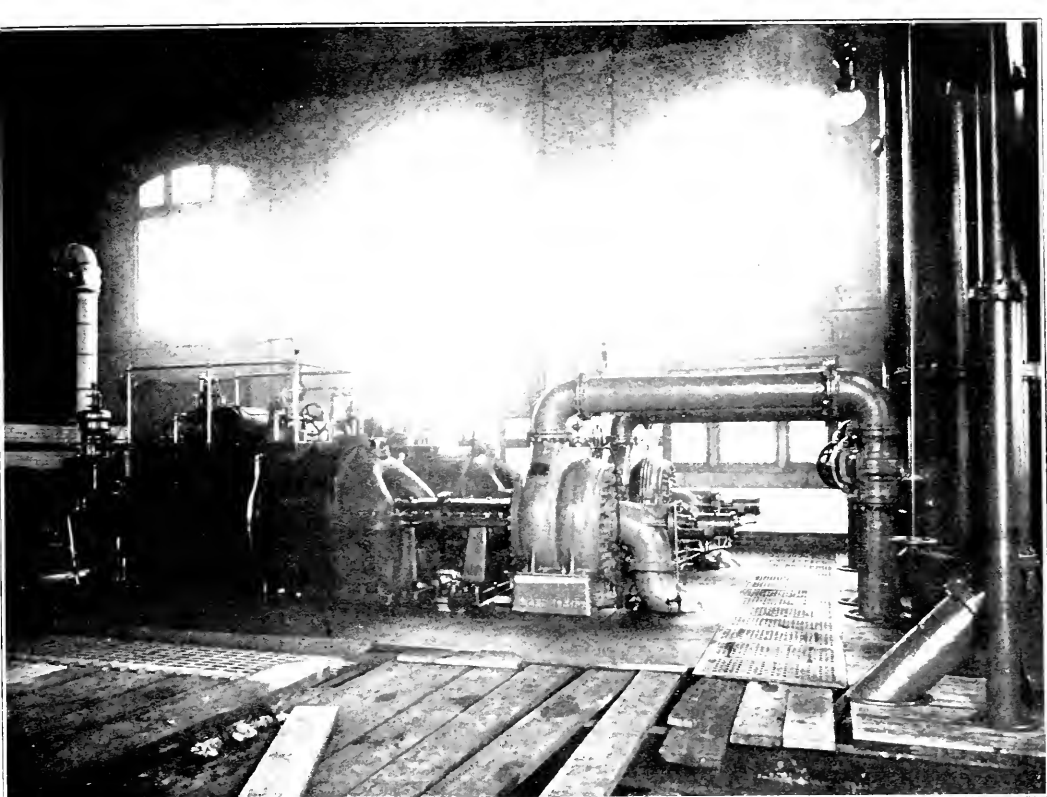
WATER FILTRATION.

This year a By-law was passed by the ratepayers granting \$750,000 for the construction of slow sand filters on the Island. The designing of these filters has been placed in the hands of Mr. Allen Hazen, the well-known expert in such matters, and it is expected that early in the coming year the work will be under contract.

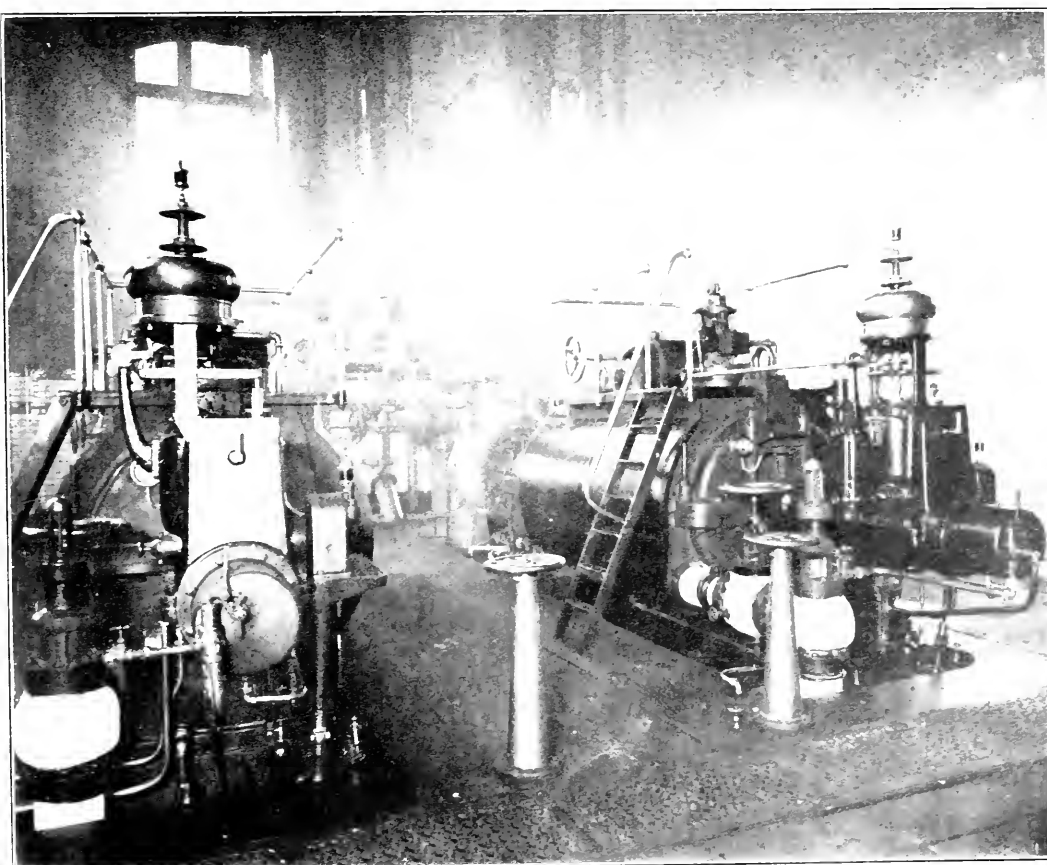
HIGH PRESSURE FIRE SYSTEM.

The area served by this system covers three hundred acres, extending from John Street easterly to Jarvis Street, and from the water front to Queen Street, with a line up Terauley to Albert, along Albert to James and up James Street two hundred feet. A line also extends up Victoria Street to Shuter Street, from Queen, and westerly on Shuter to Yonge, the length of mains laid amounting to 45,241 feet on which are located 146 hydrants.

As will be seen on reference to the plan of mains, the Pump House is situated at the foot of John Street, being an annex of the City Water Works Main Pumping Station. From this Station a 20-in. cast iron flanged pipe (supported on piles driven to the rock) is carried south about four hundred feet to Lake Street, and there turns east and runs along Lake Street to Bay Street, turning north on Bay Street and running up to Queen Street. Off of this main at each street intersection 12-in. mains are carried east and west, and on the intersections of streets running north and south across these 12-in. mains 8-in. pipes are laid, forming a gridiron of the district. All mains are controlled



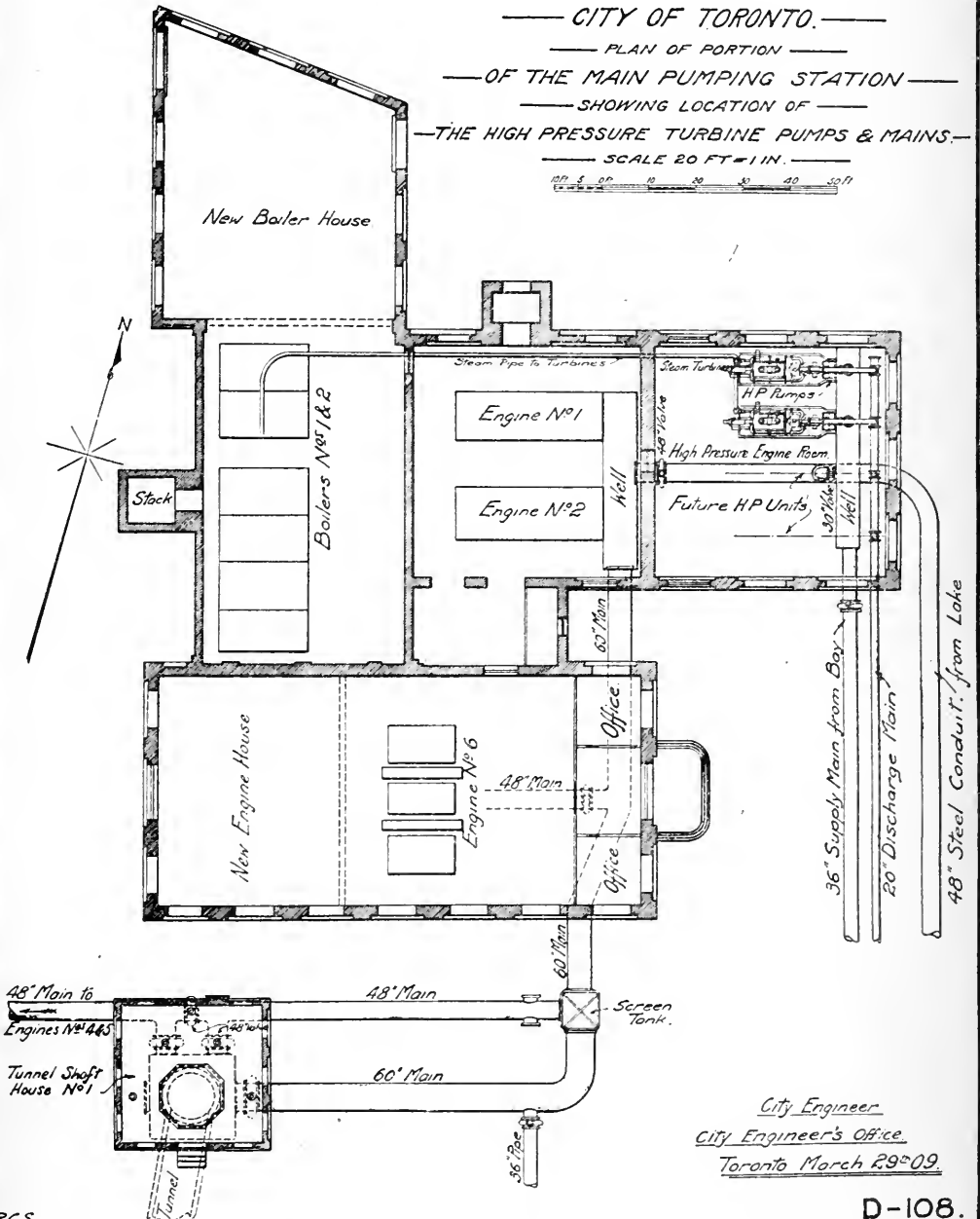
STEAM TURBINES AND CENTRIFUGAL PUMPS



STEAM TURBINES -HIGH PRESSURE FIRE SYSTEM

— CITY OF TORONTO. —
 — PLAN OF PORTION —
 — OF THE MAIN PUMPING STATION —
 — SHOWING LOCATION OF —
 — THE HIGH PRESSURE TURBINE PUMPS & MAINS. —
 — SCALE 20 FT = 1 IN. —

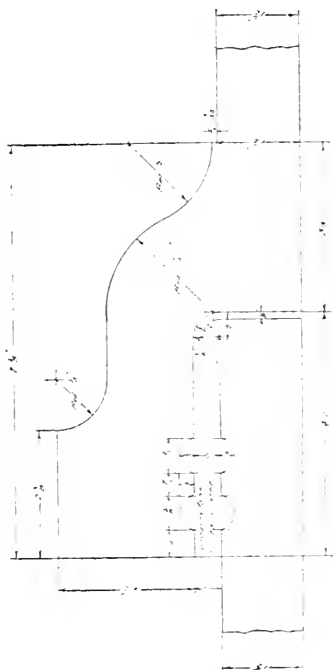
0 5 10 20 30 40 50 FT







CITY OF TORONTO
 HIGH PRESSURE FIRE SERVICE
 DETAILS OF HUB JOINTS FOR VALVES, PIPES AND SPECIALS
 SCALE FULL SIZE

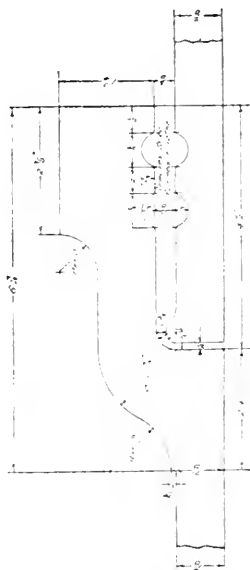


20' HUB JOINT

DRAWING 'E' AS REFERRED TO IN THE SPECIFICATION



12' HUB JOINT



8' HUB JOINT

CITY ENGINEERS OFFICE
 TORONTO AUG 3-05

Wm. H. H. H.
 CITY ENGINEER

by valves at intersections, and all hydrants are protected by valves. The whole of the pipes, valves and hydrants were tested to 450 lbs. to the square inch after being placed in the ground.

All special connections are of cast steel, and all pipe connections between mains and hydrants are of flanged steel pipe; outside of that the remaining pipes are of cast iron.

Air valves are placed at all high points on the mains.

In the pumping station are installed two 1,000 horse-power Westinghouse-Parsons horizontal steam turbines direct connected to two 2-stage five million gallon turbine pumps. The boiler room contains six 250 horse-power water tube boilers supplying steam at 150 pounds pressure to the square inch. The condensers in the engine room are of the barometric type, the vacuum obtained being 37 inches. No pumps are used for this purpose, only City pressure. The maximum pressure maintained on the mains for fire purposes is three hundred pounds to the square inch. The speed of the turbines, while maintaining this pressure, and delivering five million gallons per twenty-four hours, is 1,500 revolutions per minute. Pressure can be run up to 300 pounds in less than a minute.

On December 28th a test was made of the system by the Engineer of the Fire Underwriters' Association. The point selected for this test was the most easterly on the system, being approximately farthest from the pumps. The following is a record of the streams and resulting pressures at the hydrants.

The standing pressure being 310 pounds at the hydrants, each stream was through 250 feet of 3½-inch hose and a 2-inch nozzle.

With 3 streams the pressure dropped to.....	288 lbs.
" 5 " " "	262 "
" 7 " " "	228 "
" 8 " " "	202 "
" 8 x 1½ nozzle at hydrant	182 "

Hydrants used were two hydrants off King Street 12-in. main, and two off Jarvis Street 8-in. main, the Jarvis Street main being connected to the Front Street 12-in. main and King Street 12-in. main.

SAND PUMP No. 1.

Sand Pump No. 1 started work on April 18th at St. Andrew's Avenue, and was engaged in filling in the lots and streets at the Island

from St. Andrew's Avenue easterly till August 24th. On August 25th started work at the Royal Canadian Yacht Club, where it was engaged till October 9th. It was then towed to the foot of Oriole Avenue, and was engaged in building up roadway till November 3rd, from where it was taken to Chippewa Avenue, dredging channel until December 3rd. On December 4th started at Clandeboye Avenue and worked there till December 7th. On December 8th towed from Island and started dredging the Water Works Slip.

SAND PUMP No. 2.

Sand Pump No. 2 started pumping April 8th at Settling Basin, where it remained till April 13th. It started work at Western Sand Bar on April 14th, filling in lots and streets until June 1st, and then commenced at St. Andrew's Avenue, filling in, working there till June 10th, when it moved to Pawnee Avenue, and worked there till the 15th June. It started work at the Island Pumping Station on June 18th, finishing on June 26th, when it moved over to Hanlan's and started work there June 27th, remaining till August 29th. Then moved to Ward's on August 31st and pumped till December 7th, when it was laid up for the season.

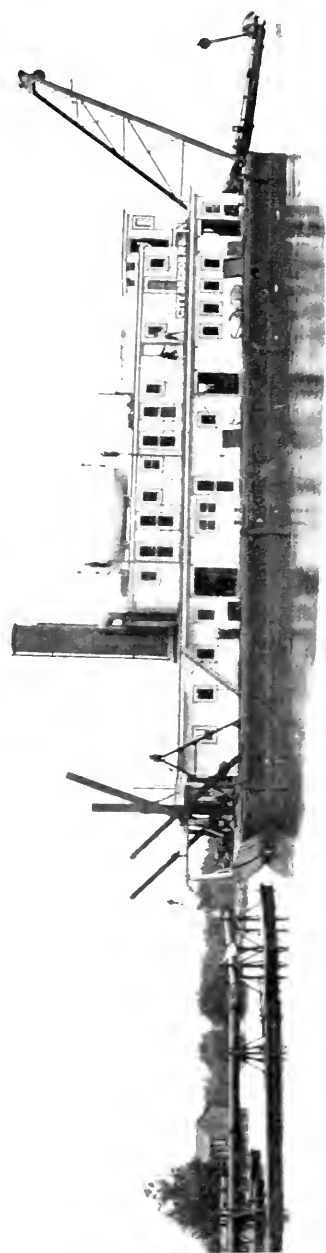
SAND PUMP No. 3.

Sand Pump No. 3 started work July 2nd at Ward's Island for testing purposes, and remained there filling in until August 8th, when it was moved to Fisherman's Island and started pumping on August 10th, working till August 17th; then it was moved to the Don August 18th, and remained there working at new channel until September 14th. On September 15th started pumping sand from Weddell & Co. for filling at Ashbridge's Bay; worked there until November 18th. Dredge was towed to Island Park on November 19th, where it worked at channel until December 9th, when it stopped for the season.

Respectfully submitted,

C. L. FELLOWES,

Deputy City Engineer.



CITY DREDGE No. 3



SCHEDULES

WATER WORKS DEPARTMENT

NOTE.—For Schedule of "Cash Expenditure on Maintenance Account," etc., see page 216.
For Schedule of "Analysis of Expenditure at Main Pumping Station," see page 216.

SCHEDULE No. 1.

STATEMENT OF WATER PUMPED BY ENGINES NOS. 1 AND 2 FOR THE YEAR 1908.

Month.	No. of Days on which Engines were Working.		Number of Hours Working Each Month.		Number of Strokes for Each Engine per Month.		Quantity of Water Pumped per Month by Each Engine in Imp. Gals. Gross.		Total Quantity Pumped in Imp. Gals. Gross.	Percentage of Slip	Total Quantity Pumped in Imp. Gals. Net.	Average Pressure on Pumps.	Average Level of Water in Well Below Zero.	Total Quantity of Coal Consumed per Month by Engines. Nos. 1 and 2.
	No. 1.	No. 2.	h. m.	h. m.	No. 1.	No. 2.	No. 1.	No. 2.						
January	26	6	571 00	123 45	439,251	80,071	100,149,912	36,752,589	136,902,501	4	131,126,401	90.6	19 6	489 930
February	21	1	466 65	3 00	361,690	1,906	83,149,320	871,854	81,024,174	4	80,663,208	92.7	20 9	288 110
March	4	5	73 00	101 45	48,653	63,970	11,092,884	29,362,230	40,455,114	4	38,836,914	92.8	19 9	
April														
May		2		29 15	17,476			8,021,484	8,021,484	4	7,700,625	91	17 3	
June		2		25 10	16,413			7,533,567	7,533,567	4	7,232,225	90	17 1	
July		8		154 00	95,627			43,892,793	43,892,793	4	42,137,082	96.5	20 1	
August		1		6 25	3,257			1,494,963	1,494,963		1,435,165	86	17 4	
September		4		57 45	40,990			18,814,410	18,814,410	4	18,061,834	89.7	20 2	
October														
November														
December														
Totals	51	29	1,110 05	501 05	892,597	319,510	191,392,116	146,746,890	341,139,006	4	327,493,451	729.3	151 11	777 1,040
Monthly averages ..	1.2	2.4	92 30	41 45	71,019	26,625	16,199,259	12,228,907	28,428,250	4	26,291,121	91.1	19	64 1,586

SCHEDULE No. 2.
STATEMENT OF WATER PUMPED BY ENGINES NOS. 1 AND 5 FOR THE YEAR 1908.

Month.	No. of Days on which Engines were working.		Number of Hours working each Month.		Number of Strokes made by Engines each Month.		Quantity of Water Pump'd each Month by each Engine Imperial Gallons, Gross.		Total Quantity Pumped by Nos. 1 & 5 Engines, Gross Imp. Gallons	Percentage of Ship.	Total Quantity Pumped, Imp. Gallons, Net.	Average Pressure on Pumps.	Average Lift by Engines.	Total Quantity of Coal used under Boilers each Month.
	No. 1.	No. 5	No. of Hours		No. of Strokes		No. 1.	No. 5.						
			h. m.	h. m.	No. 1.	No. 5.								
January	24	3	553 20	58 00	1 111,280	122,136	235,113,080	25,618,560	260,761,640	2	255,516,167	91.6	25 3	371 1,490
February	21	19	531 15	416 35	958,413	777,141	202,225,143	163,290,240	365,125,383	2	358,116,876	90.9	25 4	527 910
March	31	31	711 15	737 30	1,139,797	1,289,862	240,197,167	270,871,020	511,368,187	2	501,110,824	93.2	25 9	724 1,250
April	27	30	554 10	687 25	851,586	1,226,222	180,317,646	257,506,620	137,821,266	2	129,067,781	93.4	24 9	631 1,230
May	28	30	617 35	690 10	1,015,250	1,269,896	244,217,750	266,678,160	180,895,910	2	171,277,992	94.0	24 4	674 1,250
June	30	30	715 25	710 45	1,226,968	1,313,085	258,890,248	282,017,850	540,938,098	2	530,119,357	95.5	25 8	780 525
July	31	26	739 40	573 35	1,306,125	1,068,407	275,655,675	224,365,470	500,021,145	2	490,020,723	94.9	26 1	722 470
August	31	31	739 25	740 25	1,227,263	1,318,500	258,952,493	283,185,000	542,137,493	2	531,294,714	94.7	26 9	767 420
September	30	30	716 35	715 35	1,106,285	1,221,873	233,126,435	257,223,330	490,619,165	2	480,836,476	92.3	26 7	681 410
October	30	30	655 50	685 15	1,012,986	1,184,390	243,740,046	248,721,900	462,461,946	2	453,212,707	91.2	26 3	703 710
November	30	30	714 65	710 10	1,020,627	1,127,702	245,352,297	236,817,120	482,169,717	2	443,126,323	93.3	26 3	616 360
December	31	31	739 65	734 45	1,012,536	1,112,802	243,645,096	239,988,420	483,633,516	2	441,560,846	92.9	26 1	664 450
Totals	347	321	7,985 10	7,460 40	12,995,416	13,125,019	2,712,632,776	2,756,253,990	5,498,286,766	2	5,388,321,036	1,120.6	309 1	7,861 1,295
Monthly Averages	28.9	26.7	665 25	621 43	1,082,951	1,093,751	228,669,398	229,771,165	474,857,230	2	469,026,753	93.3	25 9	655 767

SCHEDULE No. 3.

STATEMENT OF WATER PUMPED BY ENGINE No. 6 FOR THE YEAR 1908.

Month.	No. of Days on which Engine Worked.	No. of Hours Working each Month.	Number of Strokes made by Engine each Month.	Quantity of Water Pumped each Month, Imp. Gallons Gross.	Percentage of Slip.	Quantity of Water Pumped each Month, Imp. Gallons Net.	Average Pressure on Pump	Average Lift by Engine.	Total Quantity of Coal used under Boilers each Month.
		h. m.					Pounds.	Ft. In.	Tons. Lbs.
January	31	714 00	889,601	170,421,008	7	437,491,538	94.5	23 9	624 200
February	29	661 30	804,725	125,538,580	7	395,750,880	93.0	24 7	611 275
March	28	632 40	755,116	399,479,844	7	371,516,255	96.6	24 0	638 135
April	30	719 30	845,199	417,099,874	7	415,802,881	95.4	23 0	536 1,370
May	31	711 30	846,286	417,516,636	7	416,189,911	96.9	23 0	507 10
June	30	692 50	817,303	432,189,826	7	401,936,539	98.7	24 6	557 95
July	31	744 00	882,877	466,865,357	7	434,184,783	95.2	24 7	710 675
August	31	741 15	884,994	467,984,827	7	435,225,890	98.6	25 4	578 800
September	30	720 60	875,708	463,121,982	7	430,703,444	95.6	25 7	612 670
October	31	735 20	855,863	452,586,354	7	420,899,730	97.1	24 9	571 220
November	30	719 10	819,092	433,135,849	7	402,816,310	96.4	25 0	582 260
December	31	744 00	855,565	452,391,044	7	420,723,671	95.9	25 8	614 1,620
Totals	363	8,565 45	10,132,989	5,358,324,583	7	4,983,241,865	1,453 9	233 10	7,143 330
Monthly Averages	30.2	713 45	844,415	446,527,018	7	415,270,155	96.1	24 6	595 527

Month.	Average Pressure on Suction Mains.	Total Quantity of Coal Consumed under Boilers.		Coal Consumed for Banking Fires, Raising Steam, etc.		Coal Consumed while Pumping.	
		Lbs.	Tons.	Lbs.	Tons.	Lbs.	Tons.
January.....	21.21	144	211	11	1,100	132	1,111
February	20.88	131	1,631	10	300	121	1,331
March	21.18	139	631	11	1,100	127	1,531
April	21.26	124	1,891	10	1,000	114	891
May	20.98	122	606	10	1,700	111	906
June	21.31	118	1,326	10	1,700	107	1,626
July	21.32	133	916	10	1,700	122	1,216
August ..	21.31	130	202	11	400	118	1,802
September ...	18.49	134	1,017	10	1,700	123	1,317
October	20.98	127	541	10	1,700	116	841
November	21.31	134	931	10	1,000	123	1,931
December	21.31	165	1,811	10	1,700	155	111
Totals.....	251.54	1,606	1,714	130	1,100	1,476	614
Monthly Averages .	20.96	133	309	10	1,751	123	051

SCHEDULE No. 4.
RECORD OF WATER RE-PUMPED AT HIGH LEVEL STATION FOR THE YEAR 1908.

Month.	Number of Hours Engines working.			Number of Revolutions made by Pumps.			Quantity of Water Re-pumped.			Total Quantity of Water Re-pumped by all Engines in Imp Gallons Gross.	Percentage of Ship.	Total Quantity of Water Re-pumped Imp. Gallons Net.	Average Pressure on Force Mains.	Average Pressure on Suction Mains.	Total Quantity of Coal Consumed under Boilers.		Coal Consumed for Banking Fires, Raising Steam, etc.		Coal Consumed while Pumping.	
	No. 1.	No. 2.	No. 3.	No. 1.	No. 2.	No. 3.	No. 1.	No. 2.	No. 3.						Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.
January.....	h. m. 496 00	h. m. 744 00	h. m.	1,763,462	1,742,543	.....	80,237,521	78,414,435	.....	158,651,956	1	157,065,437	58.34	Lbs. 21.21	144	241	Tons 11	Lbs. 1,100	132	1,111
February.....	464 00	696 00	.....	1,613,888	1,589,441	.....	73,431,904	71,524,845	.....	144,956,749	1	143,507,182	58.20	20.88	131	1,631	10	300	121	1,331
March.....	496 00	744 00	.....	1,682,368	1,667,943	.....	76,547,744	75,057,435	.....	151,605,179	1	150,089,128	58.22	21.18	139	631	11	1,100	127	1,531
April.....	480 00	720 00	.....	1,633,323	1,536,444	.....	74,316,196	69,139,980	.....	143,456,176	1	142,021,615	58.19	21.26	124	1,891	10	1,000	114	891
May.....	496 00	744 00	.....	1,715,231	1,604,179	.....	78,043,010	72,188,055	.....	150,231,065	1	148,728,755	58.33	20.98	122	606	10	1,700	111	906
June.....	486 00	720 00	.....	1,714,242	1,606,430	.....	77,998,011	72,289,350	.....	150,287,361	1	148,784,488	57.95	21.31	118	1,326	10	1,700	107	1,626
July.....	510 50	744 00	.....	1,874,359	1,667,322	.....	85,283,334	75,479,490	.....	160,762,824	1	159,155,196	57.77	21.32	133	916	10	1,700	122	1,216
August.....	497 30	744 00	.....	1,837,180	1,699,982	.....	83,591,690	76,499,190	.....	160,090,880	1	158,489,972	57.67	21.31	130	202	11	400	118	1,802
September.....	480 00	720 00	.....	1,859,696	1,514,653	.....	84,616,168	68,159,385	.....	152,775,553	1	151,247,798	57.13	18.49	131	1,017	10	1,700	123	1,317
October.....	496 00	744 00	.....	1,817,886	1,663,312	.....	82,713,813	74,849,040	.....	157,562,853	1	155,987,225	57.77	20.98	127	511	10	1,700	116	841
November.....	463 30	691 30	35 30	1,584,078	1,461,105	42,320	72,075,549	65,749,725	5,882,480	143,707,754	1	142,270,677	57.75	21.31	134	931	10	1,000	123	1,931
December.....	314 00	744 00	188 00	1,132,214	1,516,794	349,604	51,515,737	68,255,730	48,594,956	168,366,423	1	166,682,759	56.39	21.31	165	1,811	10	1,700	155	111
Totals.....	5,679 50	8,755 30	223 30	20,227,927	19,280,148	391,924	920,370,677	867,606,660	54,477,436	1,812,454,773	1	1,824,030,232	603.71	251.54	1,606	1,714	130	1,100	1,476	614
Monthly Averages..	473 19	729 37	18 37	1,685,660	1,606,679	32,660	76,697,556	80,633,888	1,539,786	153,537,807	1	152,002,519	57.81	20.96	133	309	10	1,751	123	651

SD 1908.

45

1908.

MON	Coal.				
	Quantity impd.	Quantity Consumed.		Total Consumption.	
	Gals. Net.	Tons.	Lbs.	Tons.	Lbs.
January	4,461,346	489	930	1,485	620
February	4,530,964	371	1,490	1,426	1,325
March..	1,493,993	624	200	1,362	1,385
April ..	4,870,662	288	110	1,168	600
May ..	5,168,531	527	940	1,181	1,260
June ..	9,288,101	611	275	1,337	620
July ..	6,342,588	724	1,250	1,432	1,145
August	7,955,799	638	135	1,345	1,220
Septemb	1,539,920	767	420	1,293	780
October	2,174,271	578	800	1,274	930
Novemb	5,942,663	681	110	*	
Decembe	5,284,517	612	670	1,198	620
Total	49,056,355	703	710	15,785	575
Daily	232,449	571	220	43	258

* A larger percentage was allowed for slip in 1894 and 1895, than in other years.

1903	288.68
1904	276.36
1905	265.81
1906	356.62
1907	379.19
1908	366.00

SCHEDULE No. 5.

COMPARATIVE STATEMENT OF COAL CONSUMED AND WATER PUMPED BY MONTHS FOR THE YEARS 1907 AND 1908.

MONTHS.	1907.						1908.					
	Engine Nos.	Water.		Coal.		Engine Nos.	Water.		Coal.			
		Quantity Pumped.	Total Quantity Pumped.	Quantity Consumed.	Total Consumption.		Quantity Pumped.	Total Quantity Pumped.	Quantity Consumed.	Total Consumption.		
		Imp.Gals. Net.	Imp.Gals. Net.	Tons. Lbs.	Tons. Lbs.		Imp.Gals. Net.	Imp. Gals. Net.	Tons. Lbs.	Tons. Lbs.		
January	1 and 2			25 140		1 and 2	131,426,401		489 930			
	4 and 5	423,658,769		639 1,080		4 and 5	255,546,407		371 1,490			
	6	377,916,507		573 610		6	437,491,538		624 290			
			801,575,267		1,237 1,830			824,464,346		1,485 620		
February	1 and 2	1,308,903		24 520		1 and 2	80,663,208		288 110			
	4 and 5	411,309,866		597 1,000		4 and 5	358,116,876		527 940			
	6	340,203,226		538 930		6	395,750,880		611 275			
			762,821,995		1,160 450			834,530,964		1,426 1,325		
March	1 and 2	9,584,756		61 220		1 and 2	38,836,914					
	4 and 5	498,275,422		714 650		4 and 5	501,140,824		724 1,250			
	6	352,803,636		509 110		6	371,516,255		638 135			
			860,663,814		1,284 980			911,493,993		1,362 1,385		
April	1 and 2	57,251,129		159 1,380		1 and 2						
	4 and 5	354,690,192		531 1,530		4 and 5	429,067,781		631 1,230			
	6	366,619,482		516 960		6	415,802,881		536 1,370			
			778,590,803		1,207 1,870			844,870,662		1,168 600		
May	1 and 2	58,902,869		189 590		1 and 2	7,700,625					
	4 and 5	440,787,499		642 1,170		4 and 5	471,277,992		674 1,250			
	6	333,352,502		471 750		6	416,189,514		507 910			
			833,042,870		1,303 120			895,168,531		1,181 1,260		
June	1 and 2	51,806,760		167 390		1 and 2	7,232,225					
	4 and 5	498,873,781		678 340		4 and 5	530,119,397		780 525			
	6	321,824,814		486 220		6	401,936,539		577 695			
			872,505,355		1,331 950			933,288,101		1,337 620		
July	1 and 2			21 1,760		1 and 2	12,137,082					
	4 and 5	568,243,281		811 1,150		4 and 5	490,020,723		722 470			
	6	381,830,283		559 240		6	494,184,783		710 675			
			950,073,564		1,392 1,150			966,342,588		1,432 1,445		
August	1 and 2	953,442				1 and 2	1,435,165					
	4 and 5	575,831,245		799 130		4 and 5	531,294,744		767 420			
	6	368,202,946		547 850		6	435,225,890		578 800			
			945,047,633		1,346 980			967,955,799		1,345 1,220		
September	1 and 2					1 and 2						
	4 and 5	547,275,924		765 1,860		4 and 5	480,836,476		681 110			
	6	368,187,009		560 230		6	430,703,114		612 670			
			915,762,933		1,326 090			911,539,920		1,293 780		
October	1 and 2	120,103,252		258 430		1 and 2	18,061,834					
	4 and 5	560,508,318		772 450		4 and 5	453,212,707		703 710			
	6	268,001,499		458 1,660		6	420,899,730		571 220			
			948,613,069		1,489 540			892,174,271		1,274 930		
November	1 and 2			9 080		1 and 2						
	4 and 5	414,201,969		610 265		4 and 5	443,126,323		616 360			
	6	428,899,247		548 655		6	402,816,340		582 260			
			843,101,216		1,167 1,000			845,942,663		1,198 620		
December	1 and 2			11 1,510		1 and 2						
	4 and 5	393,653,541		584 1,845		4 and 5	444,560,846		664 450			
	6	451,005,108		540 985		6	420,723,671		614 1,620			
			844,748,649		1,137 370			865,284,517		1,279 070		
Totals			10,356,547,148		15,384 63			10,699,056,355		15,785 575		
Daily averages			28,374,101		42 294			29,232,449		43 258		

SCHEDULE No. 6.
COMPARATIVE STATEMENT SHOWING NUMBER OF GALLONS PUMPED, QUANTITY AND COST OF FUEL, ETC., FROM 1876 TO 1908, INCLUSIVE.

YEAR.	Total Water Pumped Imp. Gals.	Quantity of Fuel. Lbs.	Total Cost of Fuel.	Average Daily Quantity of Water Pumped Imp. Gals.	Average Daily Consumption of Coal. Lbs.	Water Pumped per Pound of Fuel. — Imp. Gals.
1876	1,025,139.876	6,998,282	\$19,045.75	1,151,202	19,093	232.02
1877	2,633,133.932	10,107,992	25,556.29	7,211,887	28,515	253.02
1878	1,117,370.918	8,120,000	15,196.20	3,883,208	22,246	174.55
1879	1,610,101.512	10,872,211	19,313.07	4,111,245	29,787	148.09
1880	1,785,839.706	11,091,808	28,435.72	1,879,422	31,353	152.17
1881	1,910,130.419	12,331,871	31,110.04	3,350,456	33,950	151.18
1882	2,108,953.115	11,685,556	30,170.64	5,777,899	32,015	180.17
1883	2,809,965.184	17,206,679	43,329.08	7,698,511	47,306	162.74
1884	3,615,412.082	19,920,782	52,525.56	9,960,224	51,428	183.00
1885	3,337,482.598	18,614,105	46,589.27	9,691,733	189.73	189.73
1886	4,134,376.398	19,285,371	41,979.32	11,327,060	52,837	214.37
1887	4,117,938.169	25,283,900	50,051.85	12,103,910	63,791	189.74
1888	4,011,964.514	20,457,955	46,600.77	11,073,875	56,019	197.57
1889	4,148,781.634	19,231,940	44,135.40	11,360,525	52,690	215.72
1890	5,249,760.226	31,615,830	56,239.49	11,382,904	67,556	212.96
1891	6,207,656.403	29,300,210	60,012.77	17,067,275	80,291	241.86
1892	6,659,925.650	34,565,875	71,805.25	18,216,371	94,278	193.00
1893	6,646,021.188	26,013,840	61,702.86	18,208,278	71,270	253.17
1894	6,589,492.112	26,822,115	51,902.85	18,053,403	73,185	245.07*
1895	6,639,680.218	21,178,879	40,221.85	18,190,302	58,024	313.57
1896	6,718,187.980	18,606,508	25,307.90	18,527,836	50,837	361.4
1897	6,723,757.030	20,711,250	26,880.50	18,421,253	56,743	321.64
1898	7,136,334.102	22,100,445	27,572.00	19,351,600	60,518	322.91
1899	7,824,248.217	24,682,935	26,484.57	21,436,569	67,612	316.39
1900	8,064,384.595	21,148,565	38,668.54	22,004,291	66,160	333.35
1901	8,299,298.465	26,292,640	39,402.87	22,163,831	72,034	314.89
1902	7,993,916.325	23,769,930	39,260.22	21,901,110	61,575	339.15
1903	8,735,658.003	30,200,615	51,275.93	23,933,369	82,900	288.08
1904	9,076,711.575	32,813,325	55,781.05	24,799,758	89,735	276.36
1905	9,174,732.461	34,512,095	49,614.31	25,136,253	94,553	265.81
1906	9,859,486.414	27,619,495	43,542.28	27,012,291	75,752	356.62
1907	10,356,517.168	30,768,630	48,380.46	28,374,101	81,297	359.19
1908	10,659,056.355	31,750,575	49,226.46	29,232,449	86,750	366.00

* A larger percentage was allowed for slip in 1891 and 1895, than in other years.

SCHEDULE No. 7.
 QUANTITY OF WATER PUMPED AND QUANTITY CONSUMED DURING EACH MONTH OF 1904, WITH AMOUNT OF DAILY CONSUMPTION.

Month.	Total Quantity Pumped per Month in Imperial Gallons	Quantity Stored in Reservoir at end of each Month. Imperial Gallons	Quantity Consumed during each Month. Imperial Gallons	Average Daily Consumption of	
				Water. Imperial Gallons	Coal at Main Pumping Station. Tons.
Stored in Reservoir on 31st December, 1903.					Lbs.
January	824,164,346	28,120,960	830,798,831	26,799,962	1,185 620
February	834,530,964	21,786,475	837,483,351	28,878,736	1,426 1,325
March	911,193,393	18,834,088	902,418,601	29,110,277	1,362 1,385
April	844,870,662	27,309,480	852,774,719	28,425,823	1,168 600
May	895,168,531	30,005,423	884,222,330	28,523,301	1,181 1,260
June	939,288,101	30,951,624	944,196,469	31,473,215	1,337 620
July	966,342,588	26,043,256	976,049,933	31,485,483	1,432 1,145
August	907,955,799	16,335,911	962,505,235	31,048,556	1,345 1,220
September	911,539,920	21,781,475	915,651,727	30,521,724	1,293 780
October	892,174,271	17,674,668	881,093,542	28,422,372	1,274 930
November	845,942,663	28,755,397	845,942,663	28,198,088	1,198 620
December	865,284,517	22,348,168	871,631,746	28,119,088	1,279 70
Totals	10,699,056,355	.....	10,704,829,147	351,006,625	15,785 575
Averages	891,588,029	.....	892,069,095	29,250,552	1,315 881

Year.	Average Daily Consumption of Water.	Population.	Average Daily Consumption of Water per Capita for all Purposes.	Total Number of House Serves in use in each year.	Number of House Serves put in use in each year.	Total Number of Hoists in use in each year.	Total Number of Meters in use each year.	Total Number of Miles in use each year.	Average Pressure on Pumps.					
									No. 1, Worthington Engine.	No. 2, Worthington Engine.	No. 3, Inglis & Hunter Engine.	No. 4, Blake Engine.	No. 5, Blake Engine.	No. 6, Inglis Co. Engine.
1875 ..	3,124,000	68,678	49.86	2,769	842	.....	.....	Miles.	88.10	.....	.....	.....	.....	.....
1876 ..	4,451,202	71,693	62.09	3,512	740	.....	.....	80,250	88.78	97.51	.....	.....	.....	.....
1877 ..	2,812,000	67,386	41.71	4,518	1,006	.....	.....	107,570	83.33	97.69	.....	.....	.....	.....
1878 ..	3,883,208	70,867	54.79	6,707	2,189	28	.....	110,210	89.65	96.61	.....	.....	.....	.....
1879 ..	4,111,245	73,813	59.76	8,568	1,861	17	.....	111,290	95.28	99.01	.....	.....	.....	.....
1880 ..	4,879,422	75,110	64.96	10,411	2,044	66	.....	113,312	98.22	99.52	.....	.....	.....	.....
1881 ..	5,234,056	76,934	68.03	12,236	2,651	79	.....	115,518	96.32	100.78	.....	.....	.....	.....
1882 ..	5,777,899	81,372	71.01	11,062	1,826	94	.....	116,145	91.85	101.66	.....	.....	.....	.....
1883 ..	7,698,511	91,796	83.87	16,276	(1,766, 418)	109	.....	131,352	94.27	105.49	.....	.....	.....	.....
1884 ..	9,960,221	105,211	94.66	18,365	2,687	130	.....	138,304	99.14	107.03	.....	.....	.....	.....
1885 ..	9,706,127	111,800	86.82	20,707	2,344	110	.....	143,257	98.84	106.15	103.88	.....	.....	.....
1886 ..	11,314,337	118,403	93.81	23,643	2,936	152	.....	156,042	104.88	104.92	104.67	.....	.....	.....
1887 ..	12,060,610	125,469	95.59	26,893	3,315	176	.....	165,891	.....	.....	.....	.....	.....	.....
1888 ..	11,069,781	166,809	66.36	29,885	3,065	171	.....	182,625	93.41	92.36	91.57	.....	.....	.....
1889 ..	11,378,962	175,000	65.02	31,036	3,288	222	.....	192,832	91.25	91.82	94.92	.....	.....	.....
1890 ..	14,434,722	185,000	78.02	36,492	2,491	229	.....	229,257	92.83	93.55	93.58	.....	.....	.....
1891 ..	17,007,275	188,904	90.03	38,250	2,411	230	.....	257,367	93.33	93.66	93.91	.....	.....	.....
1892 ..	18,216,351	188,904	96.59	39,101	1,200	288	.....	242,561	.....	.....	.....	.....	.....	.....
1893 ..	18,298,278	188,904	96.38	39,927	5,265	300	.....	244,964	94.18	94.18	94.18	96.37	.....	.....
1894 ..	18,056,881	188,904	95.58	40,326	399	258	.....	245,478	91.88	91.88	91.88	95.21	95.21	.....
1895 ..	18,192,063	190,000	95.74	40,685	357	.....	.....	.....	91.88	91.88	91.88	95.05	95.05	.....
1896 ..	18,327,836	195,987	91.53	40,951	313	230	.....	249,027	91.5	91.5	91.5	95.4	95.4	.....
1897 ..	18,378,722	195,987	93.77	41,315	361	230	.....	252,616	95.4	95.4	95.4	95.7	95.7	.....
1898 ..	19,576,957	200,000	97.88	41,888	523	230	.....	255,025	95.3	95.3	95.3	95.9	95.9	.....
1899 ..	21,436,509	225,000	95.27	42,552	711	230	.....	257,013	94.9	94.9	94.9	95.3	95.3	.....
1900 ..	22,094,204	235,000	94.01	43,212	680	230	.....	258,774	94.0	94.0	94.0	95.5	95.5	.....
1901 ..	22,507,266	255,000	95.77	44,275	1,033	239	.....	260,324	93.8	93.8	93.8	93.2	93.2	.....
1902 ..	21,901,110	236,000	88.57	45,667	1,319	241	.....	261,166	91.4	91.4	91.4	92.6	92.6	.....
1903 ..	25,933,817	245,000	93.60	48,529	1,852	241	.....	266,955	94.6	94.6	94.6	93.2	93.2	.....
1904 ..	24,803,478	250,000	99.20	50,847	2,036	245	.....	272,853	94.3	94.3	94.3	93.4	93.4	.....
1905 ..	25,014,681	270,000	92.75	51,012	3,185	250	.....	286,619	94.9	94.9	.....	93.4	93.4	.....
1906 ..	26,996,007	295,000	91.51	58,053	1,044	256	.....	293,552	90.1	90.1	.....	89.1	89.1	91.9
1907 ..	28,291,168	310,000	91.2	62,034	3,961	264	.....	305,597	90.1	90.1	.....	91.9	91.9	93.8
1908 ..	29,240,552	315,000	92.8	65,303	3,772	515	.....	323,745	94.1	94.1	.....	93.3	93.3	96.1

SCHEDULE No. 9.

RECORD OF GAUGING AT ROSEHILL RESERVOIR FOR EACH MONTH OF 1908.

1908. Month.	Elevation of Lowest Water Above Zero.		Elevation of Highest Water Above Zero.		Average Eleva- tion Above Zero.		Average Depth in Reservoir.		Average Contents in Imperial Gallons.
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	
January	206	9	215	11	212	7	16	7	24,404,797
February	206	3	213	0	208	6	12	6	14,829,506
March	209	5	215	5	212	9	16	9	24,811,350
April	210	9	216	9	214	0	18	0	27,909,480
May	211	2	215	6	213	3	17	3	26,043,256
June	211	7	216	3	213	11	17	11	27,702,122
July	208	11	216	6	213	2	17	2	25,835,897
August	208	10	216	2	213	0	17	0	25,421,180
September	203	5	212	7	207	10	11	10	13,337,330
October	209	7	216	9	214	2	18	2	28,332,439
November	213	1	216	10	214	8	18	8	29,601,314
December	210	8	215	5	213	0	17	0	25,421,180
Averages					212	7	16	7	24,470,821

NOTE.—The average depth of water in the Reservoir for the year was 16 ft. 7 in., equal to an elevation of 212 ft. 7 in. above zero.

SCHEDULE No. 10.

STATEMENT OF MAINS LAID DURING THE YEAR 1908.

Street, Avenue, Etc.	Side of Street.	Location	Length in Feet.
20-IN. MAIN:			
Arthur St.	North	From 30 in. main Bathurst St. to Shaw St.	3,353
Shaw St.	Centre	" Arthur St. to Argyle St.	941
Argyle St.	South	" Shaw St. to Gladstone Ave.	2,919
Gladstone Ave.	East	" Argyle St. to Alma Ave.	93
Alma Ave.	South	" Gladstone Ave. to Dufferin St.	438½
Dufferin St.	West	" Alma Ave. to Alma extension	50½
Alma Ave. extension		Across G.T.R. & C.P.R. tracks to Earnbridge Ave.	616½
Earnbridge Ave.	North	From C. P. R'y fence to Brock Ave.	433
Brock Ave.	East	" Earnbridge Ave. to Maplegrove Ave.	156
Maple Grove Ave.	South	" Brock Ave. to O'Hara Ave.	514
O'Hara Ave.	East	" Maplegrove Ave. to Marion St.	285½
Marion St.	South	" O'Hara Ave. to Macdonell Ave.	1,012½
Macdonell Ave.	East	" Marion St. to Pearson Ave.	418½
Pearson Ave.	South	" Macdonell Ave. to Roncesvalles	2,305½
Dupont St.	South	" St. George St. to Kendall Ave.	1,607
" "	North	" Kendall Ave. to Christie St.	3,408
" "	South	" Christie St. to Shaw St.	1,337
Shaw St.	East	" Dupont St. to Burnfield Ave.	204
Burnfield Ave.	North	" Shaw St. to Ossington Ave.	706½
Ossington Ave.	East	" Burnfield Ave. to Van Horne Ave.	387½
Van Horne Ave.	South	" Ossington Ave. to Dufferin St.	2,731
Total			23,972
16-IN. MAIN:			
Dominion Radiator Company's W'ks		From Dufferin St. w. & s. to Van Horne Ave.	1,460½
Royce Ave.	South	" Dominion Radiator Co.'s Works to west City limits.	3,698
Total			5,158½
12-IN-SUB MAINS:			
Boustead Ave.	South	Across Dundas St. to Roncesvalles Ave.	130
Carlaw Ave.	East	From 860 ft. n. of Queen St. to Gerrard St.	1,480
Lansdowne Ave.	East	" Queen St. to 2,270 ft. north.	2,316½
" "	West	" 16-in. main n. across Royce Ave.	63
Osler Ave.	West	" 16 in. to 12-in. mains n. across Royce Ave.	33
Roncesvalles Ave.	West	" Queen St. n. to Boustead Ave.	5,593
St. Clair Ave.	North	" 185 ft. e. of Oriole R.R. to 36 ft. e. of Marlboro' Crescent.	353
Yonge St.	East	" St. Clair Ave. to Clarence Ave.	769
Total			16,737½

SCHEDULE No. 10.—Continued.

STATEMENT OF MAINS LAID DURING THE YEAR 1908.

Street, Avenue, Etc.	Side of Street.	Location.	Length in Feet.
8 IN. SUB-MAIN :			
Exhibition Grounds	East	From 12-in. main south along e. side of Manufacturers' Bldg.	318
Manufacturers' Bldg	South	Along s. side of Manufacturers' Bldg.	486
"	West	" w. side of Manufacturers' Bldg. north to 12-in. main.	265
Total			1,069
6 IN. SUB-MAINS :			
Ada St.	West	From Wallace Ave. to 465 ft. south	512½
Awde St.	North	" Brock Ave. to 288 ft. east.	338
Baker St.	W. & N.	" Clinton Ave. 530 ft. n., thence on n. side 711 ft. west	1,060
Balmoral Ave.	North	" Yonge St. 1,226½ ft. w. to old main.	1,273
Barrett Ave.	West	" Chelsea St. 162 ft. south.	213
Beatrice St.	West	" Bloor St. 504½ ft. south.	521½
Bedford Road	West	Extension opp. Chicora Ave. to 24 ft. south of Chicora Ave.	40
Berryman St.	North	" Hazleton Ave. to Davenport Rd.	682½
Boswell Ave.	North	From Avenue Rd. 633½ ft. w., thence to connect with 4-in. main on south side	710
Boulton Ave.	South	" Jones Ave. 625 ft. east	675
Clarence Ave.	North	" Yonge St. 885 ft., east	906
Clifford St.	North	" 62 ft. e. of Stafford St. 180 ft. east.	180
College St.	North	" 948 ft. w. of Sorauren Ave. w. to Roncesvalles Ave.	470
Constance Ave.	North	" 12 in. main on Roncesvalles Ave. to 14 ft. w. of Roncesvalles Ave.	30
Dawson Ave.	North	Extension to Leslie St. main	18
DeLisle Ave.	North	From Yonge St. to Marlboro' Cres.	1,168
Don Esplanade	West	" King St. 331 ft. south to old main.	394
Dupont St.	North	" Christie St. 134 ft. east.	172
Duncan St.	East	Jog in Pearl St. main.	12
Edwin St.	West	From Ruskin Ave. 205 ft. n. to old main	242
Elm Grove Ave.	East	" King St. to Queen St.	1,255
Emerson Ave.	West	" Lappin Ave. 269 ft. north	286
"	West	Across Royce Ave.	90
Empress Cres.	South	From 620 ft. w. of Dowling Ave., 64 ft. w.	64
"	South	" Dowling Ave. to Jameson Ave.	752
"	South	" Jameson Ave. to Starr Ave.	436
Endean Ave.	North	" Jones Ave. to Leslie St.	735
Farnham Ave.	North	" Yonge St. 1,232½ ft. w. to old main.	1,277
Fenwick Ave.	East	" 200 ft. s. of Danforth Ave., 425 ft. s.	425
Fern Ave.	North	" Roncesvalles Ave. to Sunnyside Ave	585
Follis Ave.	North	" Euclid Ave. 114 ft. w.	144
Foxbar Rd.	S. and E.	" Avenue Rd. to St. Clair Ave.	1,426
Franklyn Ave.	West	" 16 ft. s. Antler Ave. to Ruskin Ave.	305
Fraser Ave.	West	" 214 ft. s. of Liberty St., 549 ft. s.	549

SCHEDULE No. 10.—*Continued.*

STATEMENT OF MAINS LAID DURING THE YEAR 1908.

Street, Avenue, Etc.	Side of Street.	Location.	Length in Feet.
Frizzell Ave.....	North	From Pape Ave., 623 ft. e.....	670
Galley Ave.	South	" Sorauren Ave., 438½ ft. e.....	482½
"	South	" 185 ft. w. of Roncesvalles Ave., 345 ft. w.....	345
Garden Ave	North	" Roncesvalles Ave., 348 ft. w.....	354
Garnet Ave	North	" Shaw St., 104 ft. e. to old main ...	153
Geoffrey St.....	North	" 613 ft. w. of Sorauren Ave., 427 ft. w., thence s. to 6-in. main on s. s.	475
"	North	" Roncesvalles Ave. to Sunnyside Ave	614½
Glen Rd.....	West	" 240 ft. n. of Howard St., 108 ft. n. ...	108
Grace St.....	West	" Bloor St., 388 ft. s.....	404
Gwynne Ave.....	East	" Queen St. to King St.....	1,254
Hampton Ave	West	" 686 ft. s. of Danforth Ave. to Wol- frey Ave	129
Harbord St	South	" 200 ft. w. of Bathurst St. to Clinton St.....	1,424
Havelock St.....	West	" Sylvan Ave. to 48 ft. s.....	48
"	West	" 220 ft. s. of Hepbourne St., 140 ft. s.	140
Hewitt Ave.....	North	" 475 ft. w. of Roncesvalles Ave. w. to old main	108
High Park Blvd..	North	Across Roncesvalles Ave. connecting 12 and 6-in. mains and from Roncesvalles Ave., 12 ft. w.....	68
Howard Park Ave.	South	From 710 ft. w. of Roncesvalles Ave., 180 ft. w.....	180
Indian Grove	East	" 209 ft. s. of Ridout Ave. to 522 ft. n. of Ridout Ave.....	799
Irene St.....	North	" Carling Ave., 203 ft. e.....	214
Jacks Ave.....	North	" Yonge St., 649 ft. east	669
Jameson Ave	East	" King St. to Springhurst Ave.....	1,173½
"	West	Jog at Empress Cres	78
John St.....	West	From King St. to Adelaide St.....	415
"	West	" Adelaide St. to Queen St.....	730
Lansdowne Ave...	West	" 510 ft. n. of Lappin Ave., n. to Royce Ave.....	140
Leslie St	West	" Dawson Ave. to Queen Victoria Ave	105
Logan Ave.....	West	" 150 ft. s. of Danforth Ave., 324 ft. s.	324
Lovatt Pl	North	" Sumach St., 274 ft. east.....	319
Lowther Ave.....	North	" Avenue Rd., 622 ft. w., thence s. to 4 in. main.....	698½
Lucas St	North	" 1,045 ft. w. Sorauren Ave., 122 ft. w.	122
Maple Ave.....	West	" Dale Ave., 160 ft. north.....	170
Marion St.....	North	" Roncesvalles Ave. to Sunnyside Ave	587½
Marlboro' Cres...	East	" St. Clair Ave. to Heath St.....	780
Marmaduke Ave...	North	" Roncesvalles Ave. to Sunnyside	617
Melbourne Ave...	South	" Cowan Ave. to Dufferin St.	1,257½
Morrow Ave.....	South	" 244 ft. e. of Dundas St., 20 ft. e.....	20
Neepawa Ave.	South	" Lynd Ave., 137 ft. w.....	155
"	South	Across Roncesvalles Ave. from 12-in. main to 12 ft. e. of Roncesvalles Ave. ...	72

SCHEDULE No. 10.—*Continued.*

STATEMENT OF MAINS LAID DURING THE YEAR 1908.

Street, Avenue, etc.	Side of Street	Location.	Length in Feet.
Oriole Rd.....	West	From 450 ft. s. of Heath St., 280 ft. s., to St. Clair.....	280
Parkway Ave.....	North	" 420 ft. s.w. of Dundas St., 362 ft. s.w.	362
Pearl St.	North	" Simcoe St., 196 ft. w.....	230
"	South	" Duncan St. to John St.....	483½
Pearson Ave.	North	" Roncesvalles Ave., 415½ ft. w.....	421½
Pendrith Ave.	North	" 470 ft. w. of Christie St., 48 ft. w.....	48
Pleasant Ave.	North	" Yonge St., 630 ft. e.....	650
Powell Ave.	West	" Dale Ave., 157 ft. n. to old main....	167
Queen Victoria Ave	South	" Leslie St., 464 ft. e.....	512
Radford Ave.....	North	" 364 ft. w. of Alhambra Ave., 180 ft. w.	180
Ridout Ave.	North	" 272 ft. w. of Indian Rd. to Indian Gr.	130
Rosehill Ave.	North	" Yonge St., 1,318 ft. e.....	1,338
Rowanwood Ave.	North	" 422 e. of Yonge St. to Scarth Rd....	1,266
Rusholme Rd.	East	" 480 ft. n. of St. Anne's Rd. to College St.	238
Ruskin Ave.....	North	" 330 ft. w. of Perth Ave. to Edwin Ave.	430
Russill Hill Rd. ..	West	" 355 ft. n. of Clarendon Ave., 204 ft. n.	204
Scarth Rd.....	East	" Chestnut Park Rd., 718 ft. n.....	730
Seaton Sq.....	S. & E.	" Palmerston Ave., 85 ft. w., thence southerly 12 ft. to old main.....	97
Shanley Ave.....	North	" 150 e. of Salem Ave. to Bartlett Ave.	168
"	North	" 138 ft. e. of Hamburg Ave., 48 ft. e..	48
Shaw St.	West	" 138 ft. n. of Shaw Pl. to Melville Ave.	89
"	West	" 1,190 ft. n. of Bloor St. extn., 134 ft. n.	134
Shaw Pl.	North	" 449 ft. w. of Shaw St. to Ossington Ave.	203
Spencer Ave.	East	" King St. to Springhurst Ave.	1,490
Sparkhall Ave.....	North	" 340 ft. e. of Broadview Ave., 100 ft. e.	100
Springhurst Ave.	West	" 559 ft. s. of King to 616 ft. n. of Jameson Ave.	172
"	North	" Close Ave. to Jameson Ave.	406
Sproatt Ave.....	North	" 92 ft. e. of Jones Ave., 208 ft. e.....	208
Stonehouse Cres...	South	" 113 ft. e. of Dufferin to Gladstone Ave.	246½
Sunnyside Ave. ..	East	" Marion St., 270 ft. s.	319
St. Clair Ave.....	North	" Yonge St., 1,080 ft. e.....	1,100
St. Clarens Ave. ...	West	Extn. n. to Royce Ave., 62 ft. and across Royce	140
Tennis Cres.....	North	From Broadview Ave., 274 ft. e.	328
Thorold Ave.....	North	" Alhambra Ave., 379 ft. w.	397
Tyndall Ave.....	East	" King St., 762 ft. s., thence w. to 4 in. main on w.s.	808¾
Ward Ave.	West	" Connection s. from 16 in. main.....	24
Wallace Ave.....	North	From 255 ft. w. of Perth Ave., 338 ft. w....	338
Walter St.	North	" Roncesvalles Ave. to Sunnyside Ave.	569
Warren Rd.	West	" 30 ft. s. of Balmoral Ave., 108 ft. s..	108
Whitney Ave.	South	" Glen Rd., 590 ft. e.....	617
Wineva Ave.....	West	" Queen St., 206 ft. n.....	218

SCHEDULE No. 10—*Continued.*

STATEMENT OF MAINS LAID DURING THE YEAR 1908.

Street, Avenue, etc.	Side of Street.	Location.	Length in Feet.
Wolfrey Ave.	North	From 630 ft. w. of Logan Ave. to Hampton Ave.	200
Wright Ave.	North	" Rongesvalles Ave. 566 ft. w.	562
Yonge St.	East	" a point 150 ft. n. of Woodlawn Ave., across Yonge St. 25 ft. to e.s., then n. to St. Clair Ave.	1,135½
Total			52,545½
4-IN. SUB-MAINS:			
Castle Frank Cres. S. & E.		From Castle Frank Ave. e. and n. 696½ ft.	717½
Cecil St.	South	" Beverley St., 122 ft. e.	142
Harriett St.	South	" Leslie St., 512½ ft. e.	528½
Hastings Ave.	East	" Harriett St., 445½ ft. s.	463½
Kensington Place. S. & W.		" Kensington Ave., westerly 114 ft from, thence 124 ft. s. and 62 ft. n.	345½
Poplar Plains Rd., East.		" 229 ft. n. of Macpherson Ave. 111 ft. n.	111
Silver Ave.	S. W.	" Morrow Ave. to Golden Ave.	521
Total			2,859
MAINS ON PRIVATE AND OTHER PROPERTY:			
4-IN. SUB-MAINS:			
Princes' St. Yard.		Along w. side of new asphalt plant	362
6-IN. SUB-MAINS:			
S'nyside Orphanage		From Queen St. 346 ft. n.	383½
"		" 6 in. main, s. of Home, 97½ ft. w.	97½
"		" 6 in. main, n. of Home, 104½ ft. w.	104½
Total			947½

SCHEDULE No. 10—Continued.

MAINS TAKEN UP OR ABANDONED DURING THE YEAR 1908.

Street, Avenue, etc.	Side of Street.	Location.	Length in Feet.
6-IN. SUB-MAINS:			
Bonstead Ave.	South	From west line of Roncesvalles easterly to 12-in. main	130
Dovercourt Rd.	West.	Across Van Horne Ave.	30
Total			160
4-IN. SUB-MAINS:			
Jameson Ave.	West	Jog in Empress Crescent	78
8-IN. OLD CEMENT MAIN:			
John St.	West	From King to Queen Sts. (abandoned)	1,240

Mains throughout the City of all Sizes and Descriptions, including those on Streets, Government, Private or other Property, at the end of the year 1908.

Size.	Total length in feet in use at end of 1907	Put in during 1908.	Taken out or abandoned during 1908.	Total length in feet in use at the end of the year 1908.
36 inch mains	19,725 $\frac{1}{4}$	.....	.....	19,725 $\frac{1}{4}$
30 inch "	11,242	.....	.....	11,242
24 inch "	34,009	.....	.....	34,009
20 inch "	5,076	23,972	.....	29,048
16-inch "	5,691	5,158 $\frac{3}{4}$	.....	10,849 $\frac{3}{4}$
12 inch "	296,962 $\frac{3}{4}$	10,737 $\frac{1}{2}$	.....	307,700 $\frac{1}{4}$
10 inch "	14,195	.....	.....	14,195
8 inch "	9,049 $\frac{1}{2}$	1,069	.....	10,118 $\frac{1}{2}$
6-inch "	1,144,725	53,492 $\frac{3}{4}$	160	1,198,057 $\frac{3}{4}$
4 inch "	49,631 $\frac{1}{2}$	2,859	78	52,412 $\frac{1}{2}$
3 inch "	9,980 $\frac{1}{2}$	.....	.....	9,980 $\frac{1}{2}$
2 inch and 4-inch service mains ..	5,943 $\frac{1}{2}$	.....	.....	5,943 $\frac{1}{2}$
Old 8 inch cast iron mains	6,085	.....	.....	6,085
Old 8 inch cement mains	1,240	.....	1,240	.....
	1,613,556	97,289	1,478	1,709,367

Total length in use at end of year 1,709,367 feet, or 323.743 miles.

SCHEDULE No. 11.

STATEMENT OF HYDRANTS PLACED IN POSITION DURING THE YEAR 1908.

Street, Avenue, Etc.	Side of Street.	Location.
Ada St	West	156 feet south of Wallace Ave., 3-way.
"	"	462 $\frac{1}{2}$ " " " "
Albert St	South	140 feet east of Terauley St., "
Awde St	North	285 $\frac{1}{2}$ " " Brock St., 3-way.
Baker St	West	286 $\frac{1}{2}$ feet north of Clinton Ave., "
"	North	341 $\frac{1}{2}$ feet west of jog in Baker St., 3-way.
"	"	105 $\frac{1}{2}$ feet east of Baldwin's Rd., "
Balmoral Ave.....	"	304 $\frac{1}{2}$ feet west of Yonge St.
"	"	655 $\frac{1}{2}$ " " " "
"	"	936 $\frac{1}{2}$ " " " " 3-way.
Bathurst St	East	160 feet south of Nassau St., "
Berryman St.....	North	244 feet east of Hazelton Ave., "
Beatrice St	West	300 feet south of Bloor St.
"	"	34 " " College St., 3-way.
"	"	21 feet north of " "
"	"	622 $\frac{1}{2}$ " " " "
Beverley St.....	East	182 $\frac{1}{2}$ " " Queen St., "
"	"	202 " " Stephanie Place.
Boswell Ave.....	North	200 $\frac{1}{2}$ feet west of Avenue Rd.
Boulton Ave	South	310 $\frac{1}{2}$ feet east of Jones Ave.
"	"	622 $\frac{1}{2}$ " " " "
Broadview Ave....	East	8 $\frac{1}{2}$ feet north of Withrow Ave.
"	"	4 " " Bain Ave.
Castle Frank Cres.	"	281 feet south east of Castle Frank Ave., 3 way
"	"	744 " " " "
Carr St	North	184 feet west of Denison Ave., 3-way.
Clarence Ave.....	"	277 feet east of Yonge St. 3-way.
"	"	580 $\frac{1}{2}$ " " " "
"	"	883 $\frac{1}{2}$ " " " "
Clinton Ave.....	"	463 $\frac{1}{2}$ " " Oriole Rd., 3-way.
"	"	777 $\frac{1}{2}$ feet west of " "
"	"	21 $\frac{1}{2}$ feet east of Baker St. "
College St.....	"	141 " " Roncesvalles Ave., 3-way.
"	"	37 feet west of Margueretta St., "
Carlaw Ave.....	East	277 $\frac{3}{4}$ feet south of Dickens Ave.
"	"	Opposite Dickens Ave.
"	"	300 $\frac{1}{2}$ feet north of Dickens Ave., 3 way.
"	"	106 $\frac{1}{2}$ feet south of Gerrard St., "
DeLisle Ave.....	North	10 $\frac{1}{2}$ feet west of Yonge St.
"	"	333 $\frac{1}{2}$ " " " " 3-way.
"	"	605 $\frac{1}{2}$ " " " "
"	"	207 $\frac{1}{2}$ feet east of Marlboro' Cres., 3-way.
Don Esplanade W.	West	250 $\frac{1}{2}$ feet south of King St., 3-way.
Dundas St.....	East	North-east corner Chelsea St. "
Elm Grove Ave....	"	229 $\frac{1}{2}$ feet north of King St., "
"	"	315 feet south of Queen St., "
Emerson Ave.....	West	255 feet north of Lappin Ave.
Empress Cres....	South	268 $\frac{1}{2}$ feet east of Dowling Ave.
"	"	53 feet west of Jameson Ave.
"	"	181 feet east of " "
"	"	641 feet west of Dowling Ave.

SCHEDULE No. 11—Continued.

STATEMENT OF HYDRANTS PLACED IN POSITION DURING THE YEAR 1908.

Street, Avenue, etc.	Side of Street.	Location.
Endean Ave.	North	302½ feet east of Jones Ave.
Exhibition Ground S.		
Manuf'rs Bldgs.	East	Opp. porch of Mfgs. Bldg., 3 way.
" " " " " " " "	South	" " " " " "
" " " " " " " "	West	" " " " " "
Fern Ave.	North	217 feet west of Roncesvalles Ave.
" " " " " " " "		533 " " " " "
Farnham Ave.	"	306 " Yonge St., 3-way.
" " " " " " " "		658½ " " " "
" " " " " " " "		1,008 " " " "
Fenwick Ave.	East	491½ feet south of Danforth, "
" " " " " " " "		760½ " " " "
Foxbar Rd.	South	350 feet south-east of St. Clair Ave.
" " " " " " " "	East	668 " " " "
" " " " " " " "		363 feet east of Avenue Rd.
Fraser Ave.	West	501½ feet south of Liberty St., 3-way.
" " " " " " " "		758 " " " "
Frizzell Ave.	North	304 feet east of Pape Ave., 3-way.
" " " " " " " "		620½ " " " "
Galley Ave.	South	255½ " Sorauren Ave., 3-way.
" " " " " " " "		7½ " Sunnyside Ave., "
Garden Ave.	North	261½ feet west of Roncesvalles Ave.
Geoffrey St.	"	247 " " " 3-way.
" " " " " " " "	"	547 " " " "
George St.	West	242 feet south of Gerrard St.
Grace St.	"	45 feet south of Bloor St., 3-way.
" " " " " " " "	"	318½ " " " "
Greenwoods Ave.	"	346 feet north of Gerrard St.
" " " " " " " "	"	646 " " " "
Gwynne Ave.	East	257½ feet south of Queen St., 3-way.
" " " " " " " "	"	265 " Melbourne Ave., 3-way.
Hampton Ave.	West	41 feet north of Wolfrey Ave., "
Harbord St.	South	157½ feet east of Manning Ave.
Harriett St.	"	125 " Hastings Ave., 3 way.
Hastings Ave.	East	442 feet south of Harriett St.
Indian Grove	"	195 " Ridout Ave., "
" " " " " " " "	"	280 feet north of " " "
Irene St.	North	200½ feet east of Carling Ave.
Isabella St.	South	181½ " Yonge St.
Jacks Ave.	North	303 " " " "
" " " " " " " "	"	646 " " " 3-way.
Jameson Ave.	East	234½ feet south of King St., "
" " " " " " " "	"	260 feet north of Springhurst Ave., 3-way.
John St.	"	110 " Nelson St., 3-way.
" " " " " " " "	West	Opposite Pearl St., 3-way.
Kensington Pl.	"	South end of Kensington Pl.
Leonard Ave.	"	49½ feet south of Nassau St., 3 way.
Logan Ave.	"	281½ " Danforth Ave.
Lovatt Pl.	North	256½ feet east of Sumach St., 3-way.
Lowther Ave.	"	316 feet west of Avenue Rd.
Lansdowne Ave.	East	365½ feet north Queen St.

SCHEDULE No. 11—*Continued.*

STATEMENT OF HYDRANTS PLACED IN POSITION DURING THE YEAR 1908.

Street, Avenue, etc.	Side of Street.	Location.
Lansdowne Ave....	East	12 $\frac{1}{2}$ feet south of Marion St., 3-way.
" "	"	536 $\frac{1}{2}$ feet north " "
" "	"	855 $\frac{1}{2}$ " " "
" "	"	1,213 $\frac{1}{2}$ " " "
Major St.	West	18 " College St.
Marion St. West..	North	202 $\frac{1}{2}$ feet west of Roncesvalles Ave., 3-way.
" "	"	504 $\frac{1}{2}$ " " " "
Marlboro' Cres....	East	100 feet south of Heath St.
" "	"	16 " DeLisle Ave.
" "	"	16 feet north of St. Clair Ave.
Marmaduke St....	North	14 feet west of Roncesvalles Ave., 3 way.
" "	"	304 " " " "
" "	"	9 feet east of Sunnyside Ave., "
Melbourne Ave....	South	167 " Cowan Ave.
" "	"	166 " Elm Grove Ave.
" "	"	169 $\frac{3}{4}$ " Gwynne Ave., "
Mutual St.	West	300 feet south of Gerrard St. "
Neepawa Ave....	South	7 feet west of Lynd Ave.
Parkway Ave....	North	610 feet south west of Dundas St.
Pearl St.	"	129 $\frac{3}{4}$ feet west of Simcoe St., "
" "	South	167 feet east of John St., "
Pearson Ave....	North	314 feet west of Roncesvalles Ave., "
Pleasant Ave....	"	303 $\frac{1}{2}$ feet east of Yonge St., "
" "	"	627 $\frac{1}{2}$ " " "
Poplar Plains Rd..	East	Near the creek
Queen Victoria Av	South	158 $\frac{1}{2}$ feet east of Leslie St., "
" "	"	162 $\frac{1}{2}$ " " "
Ritchie Ave....	North	At e. end of street near railway fence. "
Richmond St. W..	"	157 $\frac{1}{2}$ feet west of Bay St., "
Roschill Ave	"	315 feet east of Yonge St., "
" "	"	594 $\frac{1}{2}$ " " "
" "	"	901 $\frac{3}{4}$ " " "
" "	"	1,316 " " "
Rowanwood Ave....	"	247 $\frac{1}{2}$ feet west of Scarth Rd., "
" "	"	539 " " "
" "	"	700 feet east of Yonge St. "
Rusholme Rd....	East	110 feet south of College St. "
Ruskin Ave....	North	343 feet west of Perth Ave.
" "	"	153 $\frac{1}{2}$ " Franklynn Ave.
St. Clarens Ave...	West	95 feet south of College St
St. Clair Ave....	North	304 $\frac{1}{2}$ feet east of Yonge St., 3-way.
" "	"	644 $\frac{1}{2}$ " " " "
" "	"	996 $\frac{1}{2}$ " " " "
Scarth Rd.	East	110 $\frac{1}{2}$ feet north of Chestnut Pk. Rd. "
" "	"	415 " " "
" "	"	715 " " "
Spencer Ave....	"	121 " Springhurst Ave. "
" "	"	441 $\frac{3}{4}$ " " "
" "	"	388 $\frac{1}{2}$ feet south of King St., "
Shaw St.	West	1,322 feet north of Bloor St., "
Stonehouse Cres..	South	161 feet west of Gladstone Ave., "

SCHEDULE No. 11—Continued.

STATEMENT OF HYDRANTS PLACED IN POSITION DURING THE YEAR 1908.

Street, Avenue, etc.	Side of Street.	Location.
Springhurst Ave..	North	160 feet west of Close Ave., 3-way.
Sunnyside Ave....	East	270 feet south of Marion St. West, "
Silver Ave.....	West	125 " Golden Ave.
Sussex Ave.....	South	5 feet west of Spadina Ave.
" "	North	18 " Major St.
" "	"	12 feet east of Borden St.
Tennis Cres.....	"	267½ feet east of Broadview Ave., 3-way.
Thorold Ave.....	"	376½ feet west of Alhambra Ave., "
Trinity Sq.....	North	Opposite Trinity Church, "
"	East	S. E. cor. of Trinity Sq., "
Tyndall Ave.....	"	147 feet south of King St., "
"	"	391 " " "
"	West	859 " " "
Wallace Ave.....	North	589½ feet west of Perth Ave., "
Walter St.....	"	247 " Roncesvalles Ave., "
"	"	559 " " "
Whitney Ave.....	South	South-east corner Whitney and Glen Rd., 3-way.
"	"	300 feet east of Glen Rd., 3 way.
"	"	600 feet east of Glen Rd.
Wineva Ave.....	West	203 feet north of Queen St., 3 way.
Wolfrey Ave.	North	86½ feet east of Hampton Avenue, 3 way.
Wright Ave.....	"	13½ feet west of Roncesvalles Avenue, 3-way.
"	"	317 feet west of Roncesvalles Avenue, 3 way.
Yonge St.....	East	8 feet south of Jacks Avenue, 3 way.
"	"	Opposite Balmoral Avenue.
"	"	28½ feet north of Rosehill Avenue.
"	"	17 feet north of Pleasant Avenue, 3-way.
"	"	8 feet south of St. Clair Avenue, 3 way.
"	"	291 feet north of St. Clair Avenue, 3-way.
"	"	15½ feet south of Clarence Avenue, 3 way.
HYDRANTS PLACED ON PRIVATE PROPERTY.		
Dominion Radiator Co.'s Works	North	5 4-way hydrants on north side of building.
"	West	1 4 way hydrant on west side of building
Princess St. Yard ..		Near New Asphalt Plant.
Sunnyside Orphan'ge ..		South of building, 3-way.
"		North of building, 3 way.
2-WAY HYDRANTS REMOVED FROM OFF THE STREETS.		
Elm Grove Ave....	West	309 feet south of Queen Street.
"	"	230 feet north of King Street.
Gwynne Ave.....	"	273 feet south of Queen Street.
"	"	282 feet north of King Street.
Jameson Ave.	"	610 feet south of King Street.
John St.....	"	170 feet north of King Street.
Lansdowne Ave....	"	South-west corner of Marion Street.
"	"	650 feet north of Marion Street.
"	"	350 feet south of Rideau Avenue.

SCHEDULE No. II—Continued.

STATEMENT OF HYDRANTS PLACED IN POSITION DURING THE YEAR 1908.

Street, Avenue, etc.	Side of Street.	Location.
Lowther Ave.	West	300 feet west of Avenue Road.
3-WAY HYDRANTS BEING PLACED 2-WAY HYDRANTS ALREADY IN POSITION.		
Anne St.	North	359 feet east of Yonge Street.
Bloor St.	South	258 feet east of Yonge Street.
" "	"	56½ feet west of Park Road.
" "	"	280 feet west of Sherbourne Street.
Bleecker St.	West	217 feet south of Wellesley Street.
Britain St.	South	South-west corner of Sherbourne Street.
Carlton St.	North	172½ feet east of Parliament Street.
" "	"	259½ feet east of Ontario Street.
" "	South	300 feet east of Jarvis Street.
" "	"	307½ feet west of Church Street.
" "	"	321 feet east of Yonge Street.
" "	"	South-west corner of Mutual Street.
Charles St.	"	326 feet east of Yonge Street.
Church St.	West	South-west corner of Bloor Street.
" "	"	South-west corner of Charles Street.
" "	"	North-west corner of Gloucester Street.
" "	"	North-west corner of Isabella Street.
" "	"	167 feet north of Gould Street.
Euclid Ave.	West	181 feet north of Harbord Street.
Elizabeth St.	"	South-west corner of Albert Street.
Front St.	North	North-east corner of Bay Street.
Gerrard St.	South	South-east corner of Jarvis Street.
" "	"	South-east corner of Berkeley Street.
Geoffrey St.	"	276 feet east of Roncesvalles Avenue.
Grandview Ave. .	North	302½ feet west of Logan Avenue.
Langley Ave.	"	557½ feet east of Broadview Avenue.
Madison Ave.	East	35 feet north of Lowther Avenue.
Margueretta St. .	West	193½ feet north of College Street.
" "	"	802 feet north of College Street.
Queen St. East. .	North	6 feet west of Lee Avenue.
" "	"	North-west corner of Leuty Avenue.
" "	"	81 feet west of Belfair.
Queen's Park Cr. .	East	North-east corner of College Street.
Richmond St.	South	300 feet east of Church Street.
Sackville St.	East	North-east corner of Eastern Avenue.
St. Joseph St.	South	South-west corner of Yonge Street.
" "	"	South-east corner of St. Vincent Street.
Waverley Ave.	East	362 feet south of Queen Street.
Wickson Ave.	South	South-west corner of Yonge Street.
" "	"	300 feet west of Yonge Street.
Wood St.	"	South-west corner of Mutual Street.

 SCHEDULE No. 11 --*Continued.*

SUMMARY OF HYDRANTS—1908.

Number of hydrants of all kinds on streets at end of 1907	3,441
Number of hydrants of all kinds on private property at end of 1907	103
	<hr/> 3,544
There were removed from off the streets, 10 2-way hydrants; and 41 2-way hydrants were replaced with 3-way hydrants	51
	<hr/> 3,493
Number of additional hydrants set on streets during 1908	182
Number of additional hydrants set on private property during 1908	9
	<hr/> 3,684
3-way hydrants replacing 2 way hydrants already on streets	41
	<hr/> Total..... 3,725

SCHEDULE No. 12.

TOTAL LIST OF ALL VALVES PLACED IN POSITION DURING THE YEAR 1908, SHOWING THE SIZE, LOCATION, ETC.

Street, Avenue, etc.	Side of Street.	Location.
24-INCH STOP VALVES:		
High Level Pumping Station	West	On 24-inch discharge main.
20 INCH STOP VALVES:		
Alma Ave. (ext'n.)	South	At west end at G. T. R. fence line.
Argyle St.	"	" east line of Dundas St.
" "	"	" west " "
" "	"	" " " " " " " " " " " "
" "	"	" east " " " " " " " " " " " "
Arthur St.	North	" west " " " " " " " " " " " "
" "	"	" " " " " " " " " " " "
" "	"	" east " " " " " " " " " " " "
" "	"	" " " " " " " " " " " "
" "	"	" " " " " " " " " " " "
Dupont St.	South	" " " " " " " " " " " "
" "	North	" west " " " " " " " " " " " "
" "	"	" east " " " " " " " " " " " "
" "	"	" west " " " " " " " " " " " "
" "	"	" " " " " " " " " " " "
" "	"	" east " " " " " " " " " " " "
" "	South	" " " " " " " " " " " "
Earnbridge Ave. . .	North	" " " " " " " " " " " "
High Level Pumping Station	West	On 20 inch discharge main.
Maple Grove Ave. . .	South	At east line of O'Hara Ave.
Marion St.	"	" " " " " " " " " " " "
" "	"	" west " " " " " " " " " " " "
Pearson Ave.	"	" " " " " " " " " " " "
" "	"	" " " " " " " " " " " "
" "	"	" east " " " " " " " " " " " "
Shaw St.	West	" south " " " " " " " " " " " "
Van Horne Ave. . . .	South	" west " " " " " " " " " " " "
" " "	"	" east " " " " " " " " " " " "
" " "	"	" west " " " " " " " " " " " "
" " "	"	" east " " " " " " " " " " " "
" " "	"	" " " " " " " " " " " "
16-INCH STOP VALVES:		
Dufferin St.	West	At Dominion Radiator Co.'s Works opp. Van Horne Ave.
Royde Ave.	South	" east end of Street at Dominion Radiator Co.'s fence.
" "	"	" east line of Lansdowne Ave.
" "	"	" west " " " " " " " " " " " "
" "	"	" east of Northern Railway Track.
" "	"	" west " " " " " " " " " " " "
" "	"	" east line of Symington Ave.
" "	"	" west " " " " " " " " " " " "
" "	"	" " " " " " " " " " " "

SCHEDULE No. 12—Continued.

TOTAL LIST OF ALL VALVES PLACED IN POSITION, DURING THE YEAR 1908, SHOWING THE SIZE, LOCATION, ETC.

Street, Avenue, etc.	Side of Street.	Location.
12 INCH STOP VALVES:		
Bathurst St.	East	At north line of Dupont St.
" "	"	Between 20 inch and 12 inch mains.
Carlaw Ave.	"	At south line of Dickens Ave.
" "	"	" " " Gerrard St.
Dovercourt Rd.	West	North of 20 inch main (Van Horne Ave.)
Dominion Radiator Company's Works	"	On 16 inch main fire supply.
Dufferin St.	East	At north line of Van Horne Ave.
" "	"	Between 20 in. and 12-in. mains (Van Horne)
" "	"	At south line of Alma Ave.
" "	"	North of 20-inch main (Alma Ave.)
Dundas St.	West	At south line of Argyle St.
" "	"	North of 20 inch main (Argyle St.)
" "	East	South side of lane opp. s. line of Bonstead Ave.
Lansdowne Ave.	West	At north line of Royce Ave.
" "	"	North of 16-inch main (Royce Ave.)
" "	East	At north line of Queen St.
" "	"	" south " Marion St.
" "	"	" north " " "
" "	"	South of 8 inch connection to Rubber Works.
Manning Ave.	North	Between 20-inch and 12-inch mains (Dupont St.)
Ossington Ave.	West	North of 20 inch main (Van Horne).
Oster Ave.	"	" 16 inch main (Royce Ave.)
Queen St. South ..	South	Between 12-inch main Roncesvalles Ave. and 8-inch main King St.
Roncesvalles Ave.	West	At north line of Queen St.
" "	"	" south " Pearson Ave.
" "	"	North of 20-inch main (Pearson).
" "	"	At north line of Pearson Ave.
" "	"	" south " Fern Ave.
" "	"	" north " " "
" "	"	" south " High Park Boulevard.
" "	"	" north " " " "
" "	"	" south " Constance Ave.
" "	"	" " Howard Park Ave.
" "	"	" north " " " "
" "	"	" south " Bonstead Ave.
Royce Ave.	North	West line of Northern R'y fence.
Yonge St.	East	At north line of St. Clair Ave.
8 INCH STOP VALVES:		
Exhibit'n Grounds	"	At east side of Manufacturers' Building.
" "	"	" west " " "
Macdonell Ave.	West	" south line of Pearson Ave.
" "	"	North of 20 inch main.
6 INCH STOP VALVES:		
Ada St.	West	At south line of Wallace Ave.
Adelaide St.	South	" west " Maude St.
Arthur St.	"	" east " Shaw St.

SCHEDULE No. 12—*Continued.*

TOTAL LIST OF ALL VALVES PLACED IN POSITION DURING THE YEAR 1908, SHOWING THE
SIZE, LOCATION, ETC.

Street, Avenue, etc.	Side of Street.	Location.
Arthur St.....	South	Between 20-inch and 6 inch mains.
Awde St.....	North	At east line of Brock Ave.
Baker St.....	West	" north " Lonsdale Ave.
Balmoral Ave.....	North	" west " Yonge St.
Bartlett Ave.....	West	North of 20-inch main (Van Horne).
Bathurst St.....	East	At south line of Harbord St.
Beaconsfield Ave..	West	North line of Argyle St.
" "	"	At south line of Argyle St.
Beatrice St.....	"	" south line of Bloor St.
Bellwoods Ave.....	East	South of 20 inch main (Arthur St.)
Berryman St.....	North	At east line of Hazleton Ave.
" "	"	" west " Davenport Rd.
Borden St.....	West	" south " Harbord St.
Boswell Ave.....	North	" west " Avenue Rd.
" "	"	643 ft. w. of Avenue Rd. (conn. to 4-inch).
Brock Ave.....	West	North side of Cunningham Ave.
" "	"	At south line of Earnbridge Ave.
" "	"	" " " Maple Grove Ave.
" "	"	North of 20 inch main.
Boulton Ave	South	At east line of Jones Ave.
Brunswick Ave.....	East	" south " Harbord St.
Burnfield Ave	North	" west " Shaw St.
Campbell Ave	West	North of 16-inch main.
Christie St	"	At south line of Dupont St.
" "	"	North of 20-inch main.
Claremont St.....	"	South of 20-inch main (Arthur St.)
Clarence Ave.....	North	At east line of Yonge St.
Clinton St.....	East	" south " Harbord St.
College St.....	North	" east " Roncesvalles Ave.
Constance Ave.....	"	" west " " "
Dawson Ave.....	"	" " " Leslie St.
" "	"	" east " Duncedin St.
DeLisle Ave.....	"	" west " Yonge St.
" "	"	" east " Marlboro' Cres.
Don Esplanade, w.	West	" south " King St.
Dovercourt Rd....	"	" north " Argyle St.
Dupont St.....	North	" east " Christie St.
Eastern Ave.....	"	" " " Knox St.
Edwin Ave.....	West	" north " Ruskin Ave.
Elm Grove Ave. ..	East	" south " Queen St.
" "	"	" north " King St.
Emerson Ave.....	West	" " " Lappin Ave.
" "	"	" south " Royce Ave.
" "	"	North of 16 inch main (Royce).
" "	"	At north line of Royce Ave.
Empress Cres....	South	" east " Dowling Ave.
" "	"	" " " Jameson Ave.
" "	"	" west " " "
" "	"	" " " Starr Ave.
" "	North	Opp. west line of Starr Ave.
Endean Ave.....	"	At east line of Jones Ave.

SCHEDULE No. 12.—*C* *ntinued*.

TOTAL LIST OF ALL VALVES PLACED IN POSITION DURING THE YEAR 1908, SHOWING THE
SIZE, LOCATION, ETC.

Street, Avenue, etc.	Side of Street.	Location.
Manning Ave.	West	At south line of Harbord St.
" "	"	South of 20 inch main (Arthur St.)
Maple Ave.	"	At north line of Dale Ave.
Marion St.	North	Between 20 in. and 8 in. mains (Macdonell).
" "	"	At west line of Roncesvalles Ave.
" "	"	East of 12-inch main (Roncesvalles Ave.)
" "	"	At east line of Sunnyside Ave.
Markham St.	West	" south " Harbord St.
" "	"	South of 20 inch main (Arthur St.)
Marlboro' Cres.	East	At north line of St. Clair Ave.
Marmaduke Ave.	North	" west " Roncesvalles Ave.
" "	"	" east " Sunnyside Ave.
Melbourne Ave.	South	" west line of Dufferin St.
" "	"	" east " Cowan Ave.
Neepawa Ave.	"	" " Roncesvalles Ave.
O'Hara Ave.	West	" south " Marion St.
O'Hara Ave.	"	North of 20 inch main.
Palmerston Ave.	"	South of 20 inch main (Arthur St.)
" "	"	North of Seaton Sq.
" "	"	South " "
Palmerston Blvd.	"	At south line of Harbord St.
" "	East	" " " "
Pape Ave.	West	At north line of Dagmar Ave.
" "	"	225 ft. south of Dresden Ave.
Pearl St.	North	At west line of Simcoe St.
" "	South	" east " John St.
" "	"	" west " Duncan St.
Pearson Ave.	North	" west line of Roncesvalles Ave.
Perth Ave.	West	North of 16-inch main.
Pleasant Ave.	North	At east line of Yonge St.
Powell Ave.	West	" north " Dale Ave.
Queen Victoria Ave.	South	" east " Leslie St.
Ridout Ave.	North	" west " Indian Rd.
Robert St.	East	" south " Harbord St.
Roncesvalles Ave.	"	" " Pearson Ave.
Rosehill Ave.	North	" east " Yonge St.
Rowanwood Ave.	"	" west " Scarth Rd.
Rusholme Rd.	East	" south " College St.
Scarth Rd.	"	" north " Chestnut Park Rd.
Shanley Ave.	North	" east " Bartlett Ave.
Shaw St.	West	" north " Burnfield Ave.
" "	"	South of 20-inch main.
" "	"	At north line of Hallam.
" "	"	960 ft. north of College St.
" "	"	East of 20 inch main (Argyle).
" "	"	West " " "
Shaw Pl.	North	At east line of Ossington Ave.
Sorauren Ave.	West	" south " Pearson Ave.
" "	"	North of 20 inch main (Pearson)

SCHEDULE No. 12—Continued.

TOTAL LIST OF ALL VALVES PLACED IN POSITION DURING THE YEAR 1908, SHOWING THE SIZE, LOCATION, ETC.

Street, Avenue, etc.	Side of Street.	Location.
Spadina Ave.....	West	At north line of Harbord St.
" "	" "	" south " " "
Spencer Ave.....	East	" " " King St.
" "	" "	" north " Springhurst Ave.
Springhurst Ave..	North	" east " Jameson Ave.
Stonehouse Cres..	South	" west " Gladstone Ave.
St. Clair Ave.....	North	" east " Yonge St.
St. Clarens Ave..	West	1161 ft. north of College St.
" "	" "	At south line of Royce Ave.
" "	" "	" north " " "
St. Helen's Ave....	" "	226 ft. south of Dublin St.
Tecumseth St.....	East	At north line of Defoe St.
Tennis Cres.....	North	" east " Broadview Ave.
Thorold Ave.....	" "	" west " Alhambra Ave.
Tyndall Ave.....	East	" south " King St.
" "	" "	On connection to 4-inch main.
Wallace Ave.....	North	At west line of Lansdowne Ave.
Walter St.....	" "	" " " Roncesvalles Ave.
Ward St.....	West	" south " Royce Ave.
Whitney Ave.....	South	" east " Glen Rd.
Wineva Ave.....	West	" north " Queen St.
Wolfrey Ave.....	North	" east " Hampton Ave.
Wright Ave.....	" "	" west " Roncesvalles Ave.
Yonge St.....	East	" south " Jackes Ave.
" "	" "	" " " St. Clair Ave.
4 INCH STOP VALVES:		
Castle Frank Cres.	South	" west " Castle Frank Ave.
Cecil St.....	" "	" east " Beverley St.
Harriett St.....	" "	" " " Leslie St.
Hastings Ave.....	East	" south " Harriett St.
High Park.....	" "	North-west cor. of road to Deer pens.
Jameson Ave.....	West	At north line of Springhurst Ave.
Kensington Pl.....	South	" west " Kensington Ave.
Silver Ave.....	West	" north " Morrow Ave.
" "	" "	" south " Golden Ave

SCHEDULE No. 12—Continued.

VALVES TAKEN OUT OR ABANDONED DURING 1908.

Street, Avenue, Etc.	Side of Street.	Location.
12-INCH STOP VALVES : Lansdowne Ave. . .	West	North line of Rideau Ave.
9-INCH STOP VALVES : John St	West	South line of Queen (abandoned).

SUMMARY OF VALVES ON STREETS AT END OF 1908.

Size and Description.	In use at end of 1907.	Put in during 1908.	Taken out during 1908.	Total in use at end of 1908.
STOP VALVES :				
36 inch	14	.....	.....	14
30 "	7	.....	.....	7
24 "	23	1	.....	24
20 "	8	30	.....	38
16 "	7	9	.....	16
12 "	555	37	1	591
10 "	6	.....	.....	6
9 "	6	.....	1	5
8 "	15	4	.....	19
6 "	2,061	179	.....	2,240
4 "	92	9	.....	101
3 "	30	.....	.....	30
Totals	2,824	269	2	3,091
CHECK VALVES :				
36 inch	5	.....	.....	5
30 "	4	.....	.....	4
24 "	1	.....	.....	1
20 "	1	.....	.....	1
12 "	12	.....	.....	12
6 "	50	.....	.....	50
Totals	73	.....	.....	73

SCHEDULE No. 13.

STATEMENT OF HOUSE SERVICES IN USE TO 31ST DECEMBER, 1908.

Total number of services in use previous to 1874	1,375
" " laid during 1874	552
Number of new " " 1875	842
" renewed services laid during 1875	24
" new " " 1876 by permit	141
" renewed " " 1876	12
" new " laid by Commission 1876	602
" renewed " " 1876	258
" new " " 1877	1,006
" renewed " " 1877	161
" new " " Corporation 1878	2,189
" renewed " " 1878	103
" new " " 1879	1,861
" renewed " " 1879	97
" new " " 1880	1,014
" renewed " " 1880	41
" new " " 1881	2,654
" renewed " " 1881	117
" new " " 1882	1,826
" renewed " " 1882	44
" new " " 1883	1,766
" renewed " " 1883	54
" new " " 1884	2,087
" renewed " " 1884	12
" new " " 1885	2,344
" renewed " " 1885	22
" new " " 1886	2,936
" renewed " " 1886	19
" new " " 1887	3,250
" renewed " " 1887	65
" new " " 1888	2,990
" renewed " " 1888	65
" new " " 1889	3,288
" renewed " " 1889	68
" new " " 1890	2,136
" renewed " " 1890	55
" new " " 1891	2,058
" renewed " " 1891	53
" new " " 1892	1,151
" renewed " " 1892	49
" new " " 1893	526
" renewed " " 1893	2
" new " " 1894	390

SCHEDULE No. 13—*Continued.*

Number of renewed services laid by Corporation	1894.....	11
“ new “ “ “	1895.....	319
“ renewed “ “ “	1895.....	38
“ new “ “ “	1896.....	291
“ renewed “ “ “	1896.....	45
“ new “ “ “	1897.....	474
“ renewed “ “ “	1897.....	29
“ new “ “ “	1898.....	504
“ renewed “ “ “	1898.....	32
“ new “ “ “	1899.....	664
“ renewed “ “ “	1899.....	35
“ new “ “ “	1900.....	683
“ renewed “ “ “	1900.....	26
“ new “ “ “	1901.....	1,133
“ renewed “ “ “	1901.....	8
“ new “ “ “	1902.....	1,319
“ renewed “ “ “	1902.....	13
“ new “ “ “	1903.....	1,402
“ renewed “ “ “	1903.....	45
“ new “ “ “	1904.....	2,036
“ renewed “ “ “	1904.....	48
“ new “ “ “	1905.....	3,185
“ renewed “ “ “	1905.....	20
“ new “ “ “	1906.....	4,041
“ renewed “ “ “	1906.....	31
“ new “ “ “	1907.....	3,961
“ renewed “ “ “	1907.....	8
“ new “ “ “	1908.....	3,672
“ renewed “ “ “	1908.....	3
“ services in Yorkville at time of annexation.....		448
“ “ Parkdale “ “		885
Total number of services laid on Island.....		379

SCHEDULE No. 15.
METERS REBUILT IN SHOP.

Meter.	$\frac{5}{8}$ inch.	$\frac{3}{4}$ inch.	1-inch.	1 $\frac{1}{2}$ -inch.	2-inch.	3-inch.	4-inch.	5-inch.	6 inch.	8-inch.	
Crown.....	68	30	12	.....	5	1	.....	.....	.....	.....	116
Nash.....	16	1	4	.....	.....	.....	.....	.....	.....	.....	21
Trident.....	27	13	6	.....	.....	.....	.....	.....	.....	.....	46
Hersey.....	11	4	2	.....	.....	.....	.....	.....	.....	.....	17
Lambert.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	2
Keystone.....	8	8	5	1	1	.....	.....	.....	.....	.....	23
Gem.....	.....	.....	.....	.....	13	.....	1	.....	.....	.....	14
S. & A.....	8	4	4	.....	2	1	1	.....	.....	.....	20
Worth.....	7	7	19	2	13	.....	.....	.....	.....	.....	48
Kennedy.....	.....	.....	.....	.....	.....	4	3	.....	9	.....	16
Crest.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	2
Union.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	3
Empire.....	3	1	.....	.....	.....	1	.....	.....	.....	.....	5
King.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Total.....	150	68	53	3	37	7	7	.....	9	.....	334

SCHEDULE No. 16.
METERS IN USE UP TILL DEC. 31st, 1908.

Meter.	$\frac{5}{8}$ -inch.	$\frac{3}{4}$ -inch.	1-inch.	1 $\frac{1}{2}$ -inch.	2-inch.	3-inch.	4-inch.	5-inch.	6-inch.	8-inch.	10-inch.	
Crown.....	558	255	124	.....	113	71	66	.....	11	.....	.....	1,198
Nash.....	43	29	38	.....	2	.....	.....	.....	.....	.....	.....	112
Trident.....	86	74	55	.....	.....	.....	.....	.....	.....	.....	.....	215
Hersey.....	56	25	23	.....	1	.....	.....	.....	.....	.....	.....	105
Lambert.....	20	14	12	.....	.....	.....	.....	.....	.....	.....	.....	46
Keystone.....	55	49	31	.....	1	.....	1 (Eureka)	.....	.....	.....	.....	137
Gem.....	.....	.....	.....	.....	83	15	11	.....	4	.....	1	114
Worth.....	47	69	143	35	146	35	3	.....	.....	.....	.....	478
Crest.....	.....	.....	.....	.....	.....	13	10	.....	.....	.....	.....	23
Empire.....	5	.....	3	1	.....	.....	.....	.....	.....	.....	.....	9
S. & A.....	48	63	40	.....	48	24	18	12	8	4	1	266
Kennedy.....	.....	.....	.....	.....	4	10	6	.....	16	.....	.....	36
Union.....	.....	.....	.....	.....	25	.....	.....	.....	.....	.....	.....	25
Buffalo.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1
King.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Columbia.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Total.....	921	578	470	36	423	168	115	12	39	4	2	2,768

SCHEDULE No. 17.

METERS INSPECTED AND REPAIRED WITHOUT REMOVAL.

Meter.	$\frac{1}{16}$ -inch.	$\frac{1}{8}$ -inch.	1-inch.	$1\frac{1}{2}$ -inch.	2-inch.	3-inch.	4-inch.	5-inch.	6-inch.	10-inch.	
Crown	199	101	42	1	50	29	35	....	9	....	466
Nash.....	15	9	19	..	....	....	....	....	....	....	43
Trident.....	42	43	18	....	....	....	....	....	....	....	103
Hersey.....	17	9	10	....	....	....	....	....	....	....	36
Lambert.....	3	11	4	....	....	....	....	....	....	....	18
Keystone.....	35	32	17	....	2	....	....	....	....	....	86
S. & A.	13	12	8	1	20	14	11	3	12	....	94
Worth	49	68	160	27	167	32	2	....	....	....	505
Empire	2	....	....	....	....	....	....	....	....	....	2
King.....	2	....	....	....	....	....	....	....	....	....	2
Union . . . . .	....	....	....	....	8	....	....	....	....	....	8
Gem . . . . .	....	....	....	....	36	....	7	....	5	2	50
Kennedy . . . . .	....	....	....	....	6	19	17	....	53	....	95
Crest.....	....	....	....	....	....	11	9	....	....	....	20
Total.....	377	285	278	29	289	105	81	3	79	2	1,528

SCHEDULE No. 18.

NEW METER TAKERS.

Meter.	5-inch.	3-inch.	1-inch.	1½-inch.	2-inch.	3-inch.	4-inch.	6-inch.	
Crown	16	13	12		29	8	3	2	83
Nash	4		1						5
Trident	12	7	13						32
Hersey.....	15	1	1						17
Lambert	18	12	11						41
Keystone	8	12	11		1				32
Gem.....					14	1	2		17
Worth	1	1	10	6	12				30
Crest							1		1
Empire	1								1
Total	75	46	59	6	56	9	6	2	259

SCHEDULE No. 19.

RETURN OF TEMPERATURE OF WATER FOR YEAR 1908, TAKEN AT THE SHORE CRIB
AND THE CITY HALL TAP.

DEGREES FAHRENHEIT.

Month.	Shore Crib.			City Hall Tap.		
	Highest.	Lowest.	Average.	Highest.	Lowest.	Average.
January	38	35	36.51	41	38	39.38
February	36	33	34.41	39	36	37.28
March	37	32	34.00	37	35	36.38
April	41	34	35.96	41	37	38.91
May	44	36	40.68	46	41	43.40
June	48	39	41.76	50	44	45.68
July	62	40	44.80	61	44	48.44
August	58	42	48.64	60	46	51.16
September.....	63	42	53.66	64	46	56.68
October	54	40	48.06	56	45	51.25
November	53	39	41.13	48	42	44.71
December	42	36	38.19	45	40	41.79
Average for Year	48.0	37.33	41.48	49.00	41.16	44.58

ANALYSIS OF TEMPERATURE.

Shore Crib.

The highest on September 27th, 63 deg. ; the lowest on March 10th, 32 deg. ; the lowest average in March, 34.00 deg.

City Hall Tap.

The highest on September 21st to 28th, 64 deg. ; the lowest on March 21st, 35 deg. ; the lowest average in March, 36.38 deg.

SCHEDULE No. 20.

LEAKS ON MAINS REPAIRED DURING THE YEAR 1908.

The following leaks on mains were repaired during the year :

36 inch	12
30 "	3
24 "	8
20 "	
16 "	
12 "	74
10 "	2
8 "	4
6 "	104
4 "	9
3 "	1

Total..... 217 of all sizes.

The cost of repairing these leaks (exclusive of asphalt pavement repairs was :—

Labor	\$2,118 44
Material	148 98

Total.. \$2,267 42

Average number of leaks per mile of Distribution.....	0 669
Average cost per mile	\$ 6 99
Average cost per leak (labor included)	10 44

INTEREST AND SINKING FUND.

		Total Cost, in- cluding Fuel, Interest and Sinking Fund	Wages, Main- tenance, In- terest and Sinking Fund	Total Cost per 1,000 Gals. on same.
\$	c.	\$	c.	Cents.
187
187
187
187
187
187
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187
187
187
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188
188
188
188	50,603 00	268,336 27	7.36	
188	51,614 00	256,144 50	7.24	
188	59,082 00	271,293 24	6.80	
188	63,337 00	293,512 09	6.64	
188	71,197 00	306,828 69	7.59	
188	81,104 00	342,671 81	8.25	
188	26,273 00	394,906 84	7.52	
188	26,273 00	409,127 12	6.26	
188	22,626 00	402,841 79	6.04	
188	24,732 00	413,213 70	6.21	
188	24,732 00	408,707 23	6.20	
188	24,732 00	373,640 06	5.62	
188	25,545 00	370,754 80	5.46	
188	25,545 00	367,499 80	5.46	
188	22,400 00	368,754 54	5.16	
188	22,400 00	384,685 19	4.91	
190	22,749 00	392,573 11	4.86	
190	22,749 00	394,432 97	4.75	
190	23,078 00	398,098 73	4.98	
190	26,932 00	424,847 29	4.86	
190	25,739 00	470,314 63	5.18	
190	25,739 00	472,964 81	5.01	
190	253,409 00	478,318 74	4.75	
190	296,460 00	540,715 03	5.22	
190	306,452 00	558,531 97	5.23	

Side-
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SCHEDULE No. 22.

STATEMENT OF QUANTITY OF WATER PUMPED, AND THE COST OF PUMPING, FIGURED ON COAL, WAGES, MAINTENANCE, AND INTEREST AND SINKING FUND.
MAIN PUMPING STATION.

Year.	Total Water Pumped Imp. Gallons	Total Fuel Pounds.	Cost of Fuel.	Wages.	Total Cost, including Repairs, Fuel, Wages, etc. Main Pump Station.	Fuel, Cost per 1,000 Gals.	Fuel and Wages, Cost per 1,000 Gals.	Fuel, Wages and Maintenance Cost per 1,000 Gals.	Total Working Expenses, including Collection of Revenue, including re-pumping.	Interest and Sinking Fund	Total Cost, including Fuel, Wages, Maintenance, Interest and Sinking Fund	Total Cost per 1,000 Gals. on same.
			£ s. d.	£ s. d.	£ s. d.	Cents.	Cents.	Cents.	£ s. d.	£ s. d.	£ s. d.	Cents.
1870.....	441,011,250											
1871.....	509,908,250											
1872.....	548,746,840											
1873.....	586,230,295											
1874.....	789,434,045											
1875.....	1,390,706,595	5,003,262	17,156 47	5,838 95	25,896 05	1.23	1.65	1.86				
1876.....	1,625,158,876	6,988,282	19,645 75	6,447 02	30,379 60	1.21	1.60	1.86				
1877.....	2,033,433,932	10,407,992	25,556 29	7,866 70	36,895 23	0.97	1.26	1.40				
1878.....	1,417,370,918	8,120,000	15,196 20	7,140 00	25,246 50	1.00	1.51	1.78				
1879.....	1,610,104,342	10,872,211	19,313 07	7,140 00	29,827 38	1.19	1.63	1.85				
1880.....	1,785,859,706	11,694,808	28,455 72	7,140 00	39,285 25	1.59	1.98	2.19				
1881.....	1,910,430,419	12,591,874	31,410 04	7,473 75	42,529 22	1.64	2.03	2.22				
1882.....	2,108,933,115	11,685,556	30,179 64	8,819 81	45,619 63	1.43	1.84	2.06				
1883.....	2,809,956,484	17,266,679	43,529 08	10,925 72	59,809 65	1.54	1.89	2.12				
1884.....	3,645,442,082	19,920,782	52,525 56	10,842 40	69,355 64	1.44	1.73	1.90	117,733 27	150,603 00	268,336 27	7.36
1885.....	3,537,482,598	18,644,465	46,589 27	12,017 85	65,082 39	1.31	1.64	1.84	104,530 50	151,614 00	256,144 50	7.24
1886.....	4,134,376,998	19,285,371	41,979 32	14,814 40	65,579 74	1.01	1.36	1.58	112,311 21	159,082 06	271,293 24	6.80
1887.....	4,417,988,169	23,283,900	50,051 85	16,968 79	76,597 16	1.13	1.51	1.77	120,175 09	163,337 09	293,512 09	6.64
1888.....	4,041,964,514	20,457,935	46,600 77	19,043 58	76,569 72	1.12	1.48	1.88	135,631 69	171,197 00	306,828 69	7.59
1889.....	4,148,781,634	19,231,940	44,135 10	20,192 39	75,369 77	1.06	1.54	1.81	161,567 81	181,104 00	342,671 81	8.25
1890.....	5,249,760,226	24,615,839	56,239 99	21,847 31	83,136 12	1.03	1.44	1.88	168,633 84	226,273 00	394,906 84	7.52
1891.....	6,534,375,161	29,300,240	60,012 77	22,556 49	89,060 35	0.90	1.24	1.36	182,854 12	226,273 00	409,127 12	6.26
1892.....	6,665,925,650	34,505,875	71,805 25	21,645 34	103,202 91	1.07	1.39	1.50	186,215 79	222,626 00	408,841 79	6.04
1893.....	6,646,021,488	26,013,849	64,702 86	27,078 65	100,013 77	0.97	1.37	1.50	188,481 70	224,732 00	413,213 70	6.21
1894.....	6,589,492,142	26,822,145	64,902 85	25,959 14	103,650 47	0.83	1.22	1.37	183,975 23	224,732 00	408,707 23	6.20
1895.....	6,639,680,218	21,178,879	40,221 85	23,305 49	75,502 63	0.66	1.01	1.15	148,908 06	224,732 00	373,640 06	5.62
1896.....	6,781,187,980	18,606,508	25,397 50	22,529 41	55,626 60	0.37	0.70	0.82	145,209 80	225,545 00	370,754 80	5.46
1897.....	6,723,757,030	20,711,250	26,880 50	22,933 92	57,093 25	0.39	0.73	0.84	141,954 80	225,545 00	367,499 80	5.46
1898.....	7,136,334,102	22,100,145	27,572 00	23,983 97	53,134 40	0.38	0.71	0.74	146,354 54	222,400 00	368,754 54	5.16
1899.....	7,824,348,217	24,682,935	26,684 57	24,770 54	71,279 65	0.34	0.65	0.60	162,185 19	222,400 00	384,685 19	4.91
1900.....	8,064,384,595	24,148,565	38,668 54	27,314 83	80,339 85	0.47	0.80	0.99	169,824 11	222,749 00	392,573 11	4.86
1901.....	8,299,298,465	26,272,640	39,562 56	28,295 43	78,234 31	0.47	0.81	0.94	171,683 97	222,749 00	394,432 97	4.75
1902.....	7,993,916,325	27,769,930	37,409 30	28,170 36	74,625 82	0.46	0.82	0.93	175,020 73	223,078 00	398,098 73	4.98
1903.....	8,735,658,003	30,260,615	54,275 93	31,405 90	93,591 55	0.62	0.98	1.07	197,915 19	226,932 00	424,847 19	4.86
1904.....	9,076,711,575	32,843,325	52,643 51	30,680 11	94,010 62	0.58	0.91	1.03	217,575 63	252,739 00	470,314 63	5.18
1905.....	9,174,732,461	34,512,095	49,644 31	32,917 06	89,429 66	0.54	0.89	0.97	219,325 81	252,739 00	472,064 81	5.01
1906.....	8,859,436,415	27,657,495	39,713 57	42,075 21	92,942 16	0.40	0.83	0.94	224,909 74	253,409 00	478,318 74	4.75
1907.....	10,556,547,168	30,768,630	48,380 46	43,169 00	101,910 96	0.46	0.88	0.98	244,255 03	296,460 00	540,715 03	5.22
1908.....	10,669,056,355	31,750,575	49,226 46	44,563 78	105,320 85	0.46	0.87	0.98	252,079 97	306,452 00	558,531 97	5.23

Pavements, Roadways, Permanent Sidewalks, Plank Sidewalks and Repairs.

CITY ENGINEER'S DEPARTMENT,
Toronto, 31st December, 1908.

MR. C. H. RUST,
City Engineer.

DEAR SIR,—Herewith I submit a report showing in general and detail, the extent and cost of all work done under the supervision of the Roadways Branch of the City Engineer's Department of Toronto for the year ending 31st of December, 1908.

The total number of works undertaken and carried to completion during the year was eight hundred and five, of which sixty-seven were laid by private contract under City inspection; one hundred and seventy-four of the remaining seven hundred and thirty-eight were works done by day labor, and five hundred and sixty-four were laid under contract. This is an increase over the number of works completed during 1907 of 104, and 260 over 1906.

A summary of works follows:—

Carried over from 1907	86
Contract Works	564
Day Labor Works	174
Private Permanent Works	67
	<hr/>
	805

Classifying the year's work as pavements and sidewalks the total amount laid during 1908 represents 40.326 miles of pavements and 55.416 miles of permanent sidewalks. In addition to this there was constructed 15.424 miles of concrete curbing, which was built under separate contract. A reference to Table No. 2 shows that this is an increase in mileage of pavements constructed, as compared with 1907, of 5.925 miles, or 17 per cent.

The above mileage includes 0.204 miles of new track allowance and 8.280 miles of reconstruction of old track allowance. The balance of

31.812 miles represents new pavement construction, of which nearly all is of a permanent nature.

The asphalt pavement again proved to be the largest factor in the year's paving work, 21,031 miles of a total of 40,326 miles being laid. Of this 0.19 miles was resurfacing, and the remaining 20,241 miles was new work.

55,404 miles of concrete and brick walks were constructed. This is 2,905 miles less than the amount laid during 1907, but is greater than the output of any year prior to 1907.

The day labor system, which was introduced some years ago, by which the City Engineer tenders in competition with contractors, and if awarded the contract, constructs the work, was continued during 1908 at a great saving to the property owners. The City's tender was found to be lowest on 250 contracts—119 sidewalks, 54 pavements, 1 grading and 76 curbs; 11 sidewalks, 4 pavements, 1 grading and 1 curb were done by order of Council without the formality of calling for tenders. One hundred and forty of the total number (including those ordered by Council) were done by day labor, while of the remaining one hundred and thirty, one hundred and five were transferred to contractors at the City's figures, and the remainder carried over to 1909. By the continuance of this system a saving of \$32,800.87 was effected.

TABLE No. 1.

CLASS OF PAVEMENTS & ROADWAYS CONSTRUCTED.

	<i>Number of Works.</i>	
	1907.	1908.
Asphalt	76	106
Bitulithic	28	26
Concrete	6	8
Brick on Concrete	8	11
Vitrified Block (pavement)	13	13
Asphalt Block (pavement)	4	6
Wooden Block (treated)	4	—
Cedar Block (on concrete)	—	1
Cedar Block (on sand)	1	—
Granite Setts	1	—
Macadam	4	3
Macadam Reconstruction	2	2
Tip Macadam	2	—

TABLE No. 2.

MILEAGE OF DIFFERENT CLASSES OF PAVEMENTS, ROADWAYS AND SIDEWALKS LAID FROM 1890 TO 1908.

Class of Work	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Pavements and Roadways.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Asphalt.	1.73	1.635	6.216	5.607	3.067	1.156	0.566	0.460	3.408	6.215	6.348	4.449	5.237	6.662	6.336	5.404	11.609	17.276	21.031
Bitulithic.														0.063	1.628	1.635	2.759	4.348	5.326
Cedar blk on sd & plk foundation	15.51	9.186	3.349	3.249	0.852	1.753	0.428	2.459	4.831	3.151	7.842	2.725	2.191	1.774	0.511	0.630	1.441	0.089	
Macadam.		0.123	0.434		0.659	1.663	1.661	0.510	2.089	5.013	2.503	2.733	5.486	2.737	1.940	3.373	1.591	1.431	0.973
Tar macadam.											0.068			2.148	0.920	1.257	0.247	0.738	
Colloids.	0.10	0.069	0.366																
Tamarac on concrete	0.192	0.077																	
Cedar block on concrete.			8.416	2.185	0.826	0.227	0.038		0.084	0.079		0.021		0.069		0.500			0.060
Stone sets on concrete.			0.705	3.743	2.563	0.085					0.107	0.028		0.127		0.662		0.057	
Scoria on concrete.	0.138		0.028			0.117			2.986	1.567	1.247	0.669			0.613	0.600			
Asphalt block.																			
Brick on concrete.				3.964	0.787	0.744	1.032	5.803	6.079	3.670	5.472	2.885	4.272	2.602	2.876	3.751	1.504	0.281	0.546
Brick on gravel.							0.028	0.838	0.352	0.943	0.057							2.800	2.353
Brick on broken stone.										0.546	0.516	1.027							
Treated wood blocks.																		0.306	
Concrete pavements.									0.057				0.041	0.147	0.053	0.035	0.144	0.448	0.553
Gravel.						0.071		3.138	4.756	0.069	0.303	0.222			0.398				
Reconstruct'n of track allowance.											0.203	0.270	0.186				2.303	5.330	8.280
Granite block track allowance.																	2.537		0.204
Vitrified block track allowance																	0.971	1.144	
Totals	17.670	11.090	19.574	18.748	8.154	5.816	3.553	13.208	24.642	21.120	24.666	15.029	17.413	16.839	14.756	17.902	25.097	34.401	39.326
Sidewalks:																			
Concrete	1.426	1.930	1.508	2.259	1.137	1.918	0.612	1.060	2.548	5.474	15.227	17.505	27.360	34.896	31.058	37.500	43.536	58.309	55.101
Stone flag.	1.273	0.398	0.104	0.035	0.011														
Brick.							0.204	0.823	1.188	0.292	0.038	0.511	0.049	0.093	0.001	0.037	0.130		0.303
Totals	2.699	2.328	1.612	2.294	1.148	1.918	0.816	1.873	3.736	5.766	15.265	17.816	27.409	34.989	31.059	37.537	43.666	58.309	55.404



	<i>Number of Works.</i>	
	1907.	1908.
Construction of new track allowance:		
Vitrified Block*	2	—
Granite	—	2
Reconstruction of track allowance:		
Scoria, vitrified block and concrete.	12	20
Permanent Intersection T. A.	—	9
Grading	2	6
Brick Sidewalks	—	2
Concrete Sidewalks	428	430
Concrete Sidewalks (private contract)...	66	66
Brick Sidewalks (private contract).....	—	1
Concrete Curbing	42	93
	<hr/> 701	<hr/> 805

The following table (Table No. 2) shows the past year's work classified under the various heads and compared with the work constructed during previous years. It will be seen that the mileage of asphalt, bitulithic and pavements of a permanent nature has increased, while such pavements as macadam and cedar blocks have made no gain whatever. The track allowance work is also largely in excess of that laid during 1907.

The following shows a comparison between the number of plans, drawings and estimates made during 1907 and 1908:—

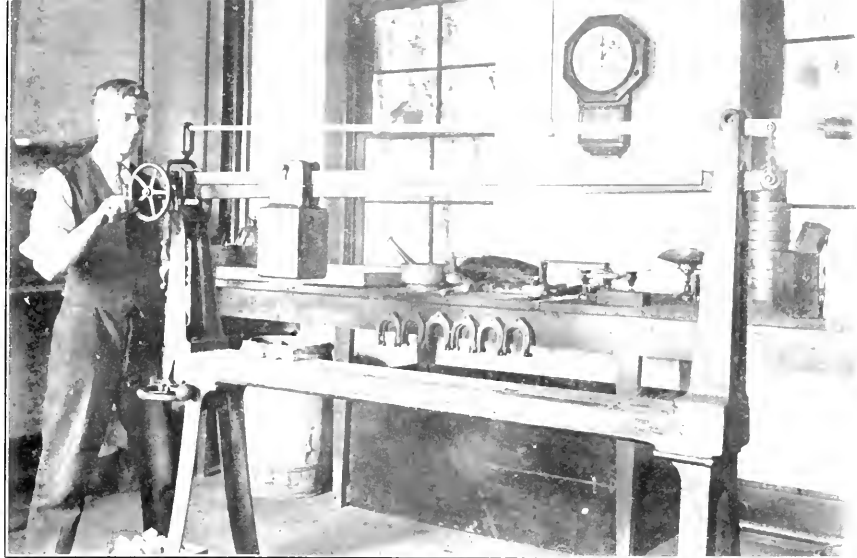
	1907.	1908.
Roadway Plans	131	160
Detailed Drawings	24	35
Estimates	828	1,061

The first pavement laid under the Local Improvement System was constructed during the year 1881, and the annual variation in mileage of paved and unpaved streets, with classification of same, up to the end of 1908, is shown in the following table:—

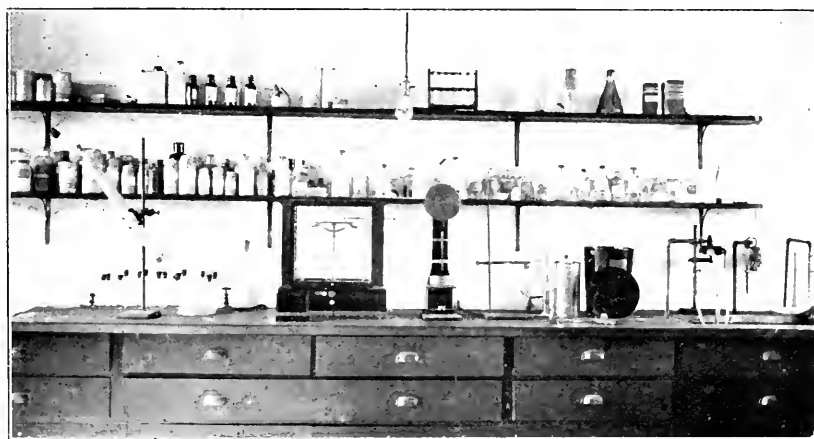
TABLE No. 3.
SHOWING THE DIFFERENT CLASSES OF PAVEMENTS AND ROADWAYS AND MILEAGE OF SAME FROM 1881 TO 1908.

Year.	Cedar Block.	Stone and Scoria.	Asphalt.	Asphaltic Block.	Wood on Concrete.	Macadam.	Bituthite.	Bricks.	Gravel.	Concrete.	Unpaved.	Total Mileage.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
1881..	3.51	0.03	.....	.....	.....	50.92	.....	.....	.....	.....	62.39	116.85
1882..	13.41	0.03	.....	.....	.....	48.28	.....	.....	.....	.....	55.13	116.85
1883..	26.90	0.03	.....	.....	.....	54.37	.....	.....	.....	.....	51.07	133.37
1884..	33.76	0.25	.....	.....	.....	52.32	.....	.....	.....	.....	76.77	163.10
1885..	39.84	0.25	.....	.....	.....	50.17	.....	.....	.....	.....	75.98	166.24
1886..	48.99	0.36	.....	.....	.....	47.36	.....	.....	.....	.....	72.18	168.89
1887..	64.11	0.36	0.07	.....	.....	45.14	.....	.....	.....	.....	59.21	168.89
1888..	79.35	0.36	0.25	.....	.....	42.76	.....	.....	.....	.....	49.87	172.79
1889..	92.39	0.36	3.36	.....	.....	38.65	.....	.....	.....	.....	107.43	242.19
1890..	109.57	0.36	5.08	.....	.....	36.63	.....	.....	.....	.....	90.55	242.19
1891..	116.83	0.59	6.66	.....	0.49	36.39	.....	.....	.....	.....	89.44	250.40
1892..	116.86	0.65	10.49	.....	0.49	36.39	.....	.....	.....	.....	84.89	252.71
1893..	112.19	0.79	11.28	.....	0.49	34.98	.....	.....	.....	.....	82.05	253.35
1894..	111.16	0.81	13.70	.....	0.49	39.95	.....	.....	.....	.....	79.98	253.48
1895..	109.78	0.81	14.38	.....	0.49	39.15	.....	0.38	.....	.....	79.48	256.40
1896..	108.70	0.81	14.61	.....	0.53	39.71	.....	1.32	.....	.....	79.74	257.40
1897..	101.36	0.81	15.07	.....	0.53	40.50	.....	3.58	3.22	.....	78.45	258.30
1898..	94.90	0.65	18.30	.....	0.61	41.91	.....	5.91	4.56	.....	78.67	257.93
1899..	81.77	0.65	24.33	.....	0.67	45.03	.....	8.77	5.03	.....	78.14	259.03
1900..	70.49	0.68	30.81	.....	0.67	46.69	.....	10.77	5.34	.....	77.26	259.12
1901..	61.48	0.81	34.92	.....	0.67	48.36	.....	11.53	5.54	.....	77.22	259.60
1902..	48.57	0.81	39.75	.....	0.25	50.02	.....	12.51	5.39	.....	77.66	260.14
1903..	43.25	1.15	46.44	.....	0.26	50.11	.....	14.24	5.87	.....	79.39	265.40
1904..	34.33	1.11	52.10	.....	0.26	54.56	.....	15.54	5.83	0.20	75.81	265.45
1905..	48.83	1.74	56.29	.....	0.26	54.92	.....	17.14	5.83	0.13	82.36	276.13
1906..	40.53	1.74	63.71	.....	0.51	54.39	.....	18.58	5.83	0.27	80.17	277.46
1907..	32.29	1.64	80.04	0.34	0.66	47.83	.....	20.73	5.10	0.22	73.90	279.51
1908..	24.77	2.36	101.07	0.97	0.45	44.16	.....	23.90	13.65	1.56	71.95	306.31

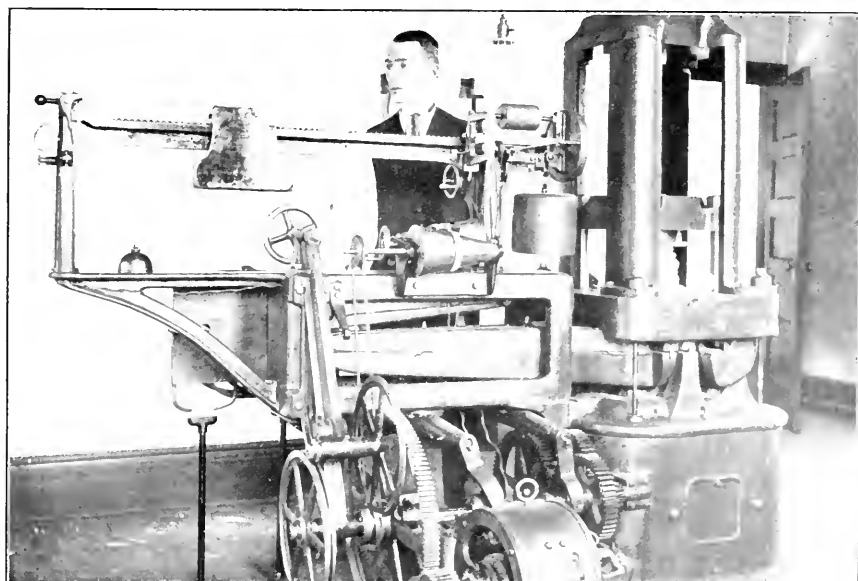
* Including cedar block and macadam with paved track allowance respectively.



CEMENT TESTING



ANALYTICAL SECTION



50 TON UNIVERSAL TESTING MACHINE—TESTING LABORATORY

Table No. 4 shows the percentage of the different classes of pavements and roadways.

TABLE No. 4.

*Cedar Block	8.10
Stone and Scoria	0.77
Asphalt	33.03
Asphalt Block	0.31
Wood on Concrete (treated)	0.14
*Macadam	14.42
Tar Macadam	1.86
Bitulithic	5.12
Brick	7.80
Gravel	4.45
Concrete	0.50
Unpaved	23.50
	<hr/>
	100.00

*Including pavement with paved track allowance.

ASPHALT PAVEMENTS.

There were laid during the past year a total of one hundred and six asphalt pavements, of which 86 were of the light class, 17 were heavy pavements, and in 3 cases the old worn-out surface was stripped off and replaced with a new surface. The total yardage laid was 313,532 square yards, of which 60,229 square yards was of the heavy type, having 2-inch surface, 1-inch binder and 6-inch concrete foundation; 239,482 square yards of light pavement composed of 2-inch surface and 4-inch concrete foundation and 13,821 square yards of resurfacing, all of which consisted of 2-inch surface and 1-inch binder.

The above yardage represents 21.031 miles of asphalt pavement as against 17.276 miles laid during 1907.

It has been found in some instances, when the class of asphalt pavement to be laid was under consideration, that some doubt existed as to whether the light or heavy type of pavement should be used. In such cases it has been the custom to recommend the heavy type, thus being on the safe side. To meet such requirements it has been decided to establish a new class of asphalt pavement, having 2-inch surface, 1-inch binder, and 5-inch concrete foundation.

This pavement, while being slightly more costly than the light class, will be cheaper than the heavy type, and will be applicable in a great many cases where the other two are not.

It must be borne in mind that the above yardage includes concrete gutters, which were built on each side of the pavement in every case, and average 15 inches in width.

In 1901 a table was compiled showing the maximum, minimum and average price for heavy and light pavements from 1901 to 1904. Below is found this table brought to date by the addition of the prices which prevailed during 1908.

	Maximum.	Minimum.	Average.
1901 Heavy	\$2 70	\$2 30	\$2 54 $\frac{6}{10}$
" Light	2 23	1 88	2 04 $\frac{1}{2}$
1902 Heavy	2 60	2 45	2 54
" Light	2 15	1 66	2 01 $\frac{1}{4}$
1903 Heavy	2 50	2 14	2 21 $\frac{3}{8}$
" Light	1 88	1 60	1 70
1904 Heavy	2 30	2 15	2 22 $\frac{6}{10}$
" Light	1 83	1 53	1 65
1905 Heavy	2 19	1 99	2 05
" Light	1 66	1 36	1 51
1906 Heavy	2 01	1 79	1 91 $\frac{1}{2}$
" Light	1 64	1 38	1 42 $\frac{3}{8}$
1907 Heavy	2 27	2 14	2 19
" Light	1 83	1 50	1 62
1908 Heavy	2 33	1 92	2 15 $\frac{7}{8}$
" Light	1 96	1 33	1 51 $\frac{3}{8}$

This shows a decrease of 1.8 per cent. in the contract cost of heavy asphalt, and 6 per cent. in that of light asphalt, as compared with the prices prevailing during 1907.

During 1908 the City constructed by day labor a total of 19 asphalt pavements, or a length of 2.48 miles. The above mileage represents 35,735 square yards, and is eleven per cent. of the total yardage laid during the year.

In addition to this new work 49,965 square yards of repairs were laid, keeping those pavements which are out of guarantee in excellent condition. The average cost per square yard of repairs was 52 cents. This price includes an allowance for maintenance of plant, etc., and when compared with the contract price of 76 cents per square yard for 1907, shows a gain to the City of 24 cents per square yard, or a total saving of \$9,536.40.

In conjunction with asphalt pavements 66,932 lineal feet of concrete curb and gutter were placed during the year.

The quantities, prices, and other details connected with the asphalt pavements constructed during the year are tabulated in Tables Nos. 4 and 8. The physical and chemical analyses of the asphalt mixtures used in paving during the year are also tabulated separately.

Table No. 5 is a list of streets paved with asphalt on which the contractors' term of guarantee has expired.

TABLE No. 5.
SHOWING STREETS PAVED WITH ASPHALT UPON WHICH THE CONTRACTORS' GUARANTEES HAVE EXPIRED.

Street.	From.	To.	Length Feet.	Date of Expiry of Guarantee.
Wellington.....	Church.....	Yonge.....	900	June 28, 1894
Sherbourne.....	Queen.....	Bloor.....	6,786	June 1, 1895
Ontario.....	Carlton.....	Howard.....	2,824	July 28, 1895
Sherbourne.....	King.....	Queen.....	1,160	July 2, 1895
Scott.....	Front.....	Colborne.....	374	Nov. 7, 1895
Wellington.....	Bay.....	York.....	848	July 18, 1896
Gerrard.....	Jarvis.....	Sherbourne.....	934	July 14, 1896
Sherbourne.....	The bridge.....	South Drive.....	1,076	Nov. 11, 1896
St. George.....	College.....	Bloor.....	3,286	Sept. 25, 1896
Adelaide.....	York.....	Spadina.....	3,001	July 21, 1897
Victoria.....	King.....	Adelaide.....	414	Sept. 1, 1897
Rose.....	Howard.....	Winchester.....	2,134	Sept. 1, 1897
St. James.....	Ontario.....	Parliament.....	595	Sept. 7, 1897
Devonshire Pl.....	Hoskin.....	Bloor.....	1,228	Sept. 30, 1897
Richmond.....	Victoria.....	Bay.....	852	June 27, 1898
Winchester.....	Parliament.....	Sumach.....	1,512	Aug. 24, 1898
Munn's Lane.....	Wellington.....	218 ft. north.....	218	Aug. 13, 1898
Lane Around Inland Revenue Office			265	Oct. 5, 1898
Hoskin.....	St. George.....	Queen's Pk. Cr.....	1,130	June 27, 1899
Carlton.....	Jarvis.....	Sherbourne.....	937	June 7, 1899
Bleecker.....	Carlton.....	Wellesley.....	1,412	July 5, 1899
Wellesley.....	Sherbourne.....	Parliament.....	1,227	Sept. 25, 1899
Cecil.....	Spadina.....	Beverley.....	1,052	Sept. 27, 1899
Adelaide.....	Yonge.....	Church.....	903	Nov. 8, 1899
King.....	Simcoe.....	Sherbourne.....	4,999	June 15, 1899
Leader Lane.....	King.....	Colborne.....	197	May 25, 1900
Avenue Road.....	Bloor.....	Davenport.....	2,289	Aug. 29, 1900
St. Patrick.....	McCaul.....	Beverley.....	606	Sept. 9, 1900
Victoria.....	Adelaide.....	Queen.....	694	Sept. 28, 1900
Lane 1st W. of Yonge.....	Adelaide.....	Temperance.....	177	May 28, 1901
Also lane running	E. and W. from above lane.....		303	May 28, 1901
Leader Lane.....	Wellington.....	Colborne.....	193	May 25, 1901
Queen Street bridge	.....	At Don.....	134	July 25, 1905
Brimswick Ave.....	College.....	Ulster.....	1,262	Oct. 20, 1906
Aberdeen Ave.....	Ontario.....	222 ft. east.....	222	May 15, 1907
Berkeley.....	Gerrard.....	Carlton.....	677	Oct. 14, 1907

Street.	From.	To.	Length Feet.	Date of Expiry of Guarantee.
Front	Yonge	Church	942	June 30, 1907
Adelaide	Yonge	Bay	586	Aug. 17, 1907
Front	Lorne	Bay	} Fire District.	
Bay	Melinda	Front		
Carlton	Yonge	Jarvis	1,653	July 19, 1908
Jameson Ave.	King	Queen	1,181	Aug. 9, 1908
Jameson Ave.	King	G.T.R.	1,254	Aug. 15, 1908
Euclid Ave.	College	Ulster	1,256	Sept. 13, 1908
York	King	Front	925	Aug. 31, 1908
Spencer Ave.	King	Springhurst ..	1,470	Oct. 15, 1908
Colborne	Yonge	Church	902	Oct. 31, 1908
Sussex Ave.	Spadina	St. George	872	Nov. 15, 1908
Willecock	St. George	Robert	1,260	July 11, 1908
Howard	Sherbourne	Parliament	1,417	Aug. 3, 1908
Yonge	Bloor	Davenport	1,010	Aug. 25, 1908
Queen	John	Bathurst	3,616	Oct. 22, 1908
Cowan	King	Queen	1,179	Nov. 7, 1908

ASPHALT BLOCK PAVEMENT.

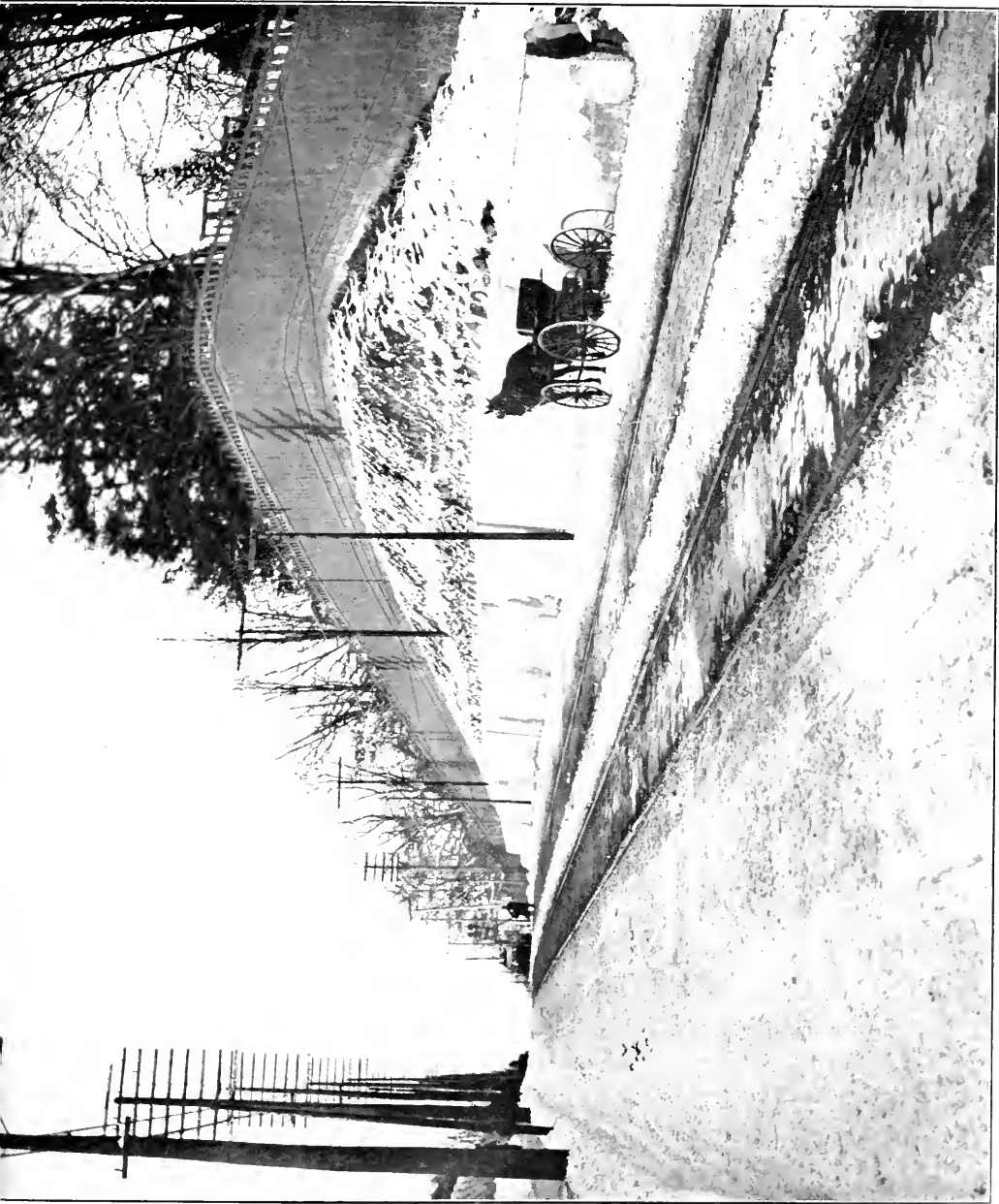
The use of asphalt block as a paving material was continued during the past year, 0.546 miles being laid, which represents a yardage of 9,469 square yards, compared with the 5,097 square yards laid prior to 1907; this year's yardage shows an increase of 4,372 square yards.

While the earlier pavements of this class consisted, except in one instance, of a 3-inch block resting on a 1½-inch mortar cushion, and a 4 or 6-inch concrete foundation, it has been decided to use 3-inch blocks on streets having moderate traffic, and 4-inch blocks on very heavily travelled streets.

In conjunction with asphalt block pavements 5,764 lineal feet of concrete gutter were constructed.

BRICK AND VITRIFIED BLOCK PAVEMENTS.

During the year there were constructed 11 brick pavements and 13 vitrified block pavements, which aggregate 16,642 square yards, and 14,106 square yards respectively, or a total yardage of 30,748 square yards. This is 15,669 square yards less than the amount laid during 1907.



CONCRETE RETAINING WALL, AVENUE ROAD



The above yardage represents a total mileage of 2.353 miles.

This class of material makes a very durable pavement, but is not laid extensively owing to the strong prejudice of the public against it because of the noise created by wheeled traffic.

In nearly every instance Canadian block was used in preference to the American product. This was largely due to the high price of the latter, which was in the neighborhood of \$30 per thousand delivered on the street.

In connection with brick pavements 12,191 lineal feet of concrete curbing were placed.

The quality of the blocks, as determined by the standard abrasion test, is indicated by the following ratio:

Canadian (after 1,000 revols.)	14.8 per cent.
American (after 1,000 revols.)	12.0 per cent.
Canadian (after 2,000 revols.)	23.1 per cent.
American (after 2,000 revols.)	18.0 per cent.

TRACK ALLOWANCE CONSTRUCTION AND RECONSTRUCTION.

There was completed during the year 0.204 miles of new granite block track allowance, and 8.280 miles of track allowance reconstruction. Compared with last year this shows an increase of 2.010 miles in this class of work.

Although this work is largely of a temporary nature, it is a vast improvement on the previous condition of the tracks, and adds greatly to the comfort and safety of the travelling public.

Since 1906, when the renewal of worn-out track allowances was commenced on a systematic basis, 20.769 miles of work has been completed, and it is the intention to carry on during the coming season the thorough repair of such tracks as are in bad condition.

In the case of new track work it is the intention to change the cross section of the foundation by making it a uniform depth of 12 inches. The width of the track allowance on all such new work has also been extended from 16 ft. 6 in. to 18 ft. This latter change is due to the increased width of the devil strip, which in future will be made 5 ft. in width.

In addition to the general reconstruction work on track allowances completed during the year, a number of main intersections, some of

which were in a very dilapidated condition, were torn up and replaced with new steel on a 12-inch concrete foundation, paving blocks being laid after the steel had been placed.

The details of these intersections are found in Table No. 7.

The following table shows the streets on which new steel has been laid since 1906.

Year.	Street.	From.	To.	Class of Steel.	Length of Track.
*1906	Dupont	Bathurst	Christie	7-in.—90 lb.	1918 lin. ft. double
†1906	Dupont	Wahner	Bathurst	7 “—90 “	1634 “ “
1906	Gerrard	Leslie	Greenwood	7 “—90 “	1396 “ “
†1906	Gerrard	Pape	Leslie	7 “—90 “	1977 “ “
1906	Lansdowne	College	Bloor	7 “—90 “	2850 “ “
†1906	Richmond	York	Victoria	7 “—90 “	1925 “ “
†1906	Scott	Front	Wellington	7 “—90 “	299 “ single
†1906	Victoria	Richmond	Queen	7 “—90 “	298 “ double
†1906	Wellington	Scott	Yonge	7 “—90 “	298 “ single
†1906	Lansdowne and Avenue Road	College 241 ft. n. Cot- tingham	St. Clair	7 “—90 “	117 “ double
†1906	Dovercourt	Bloor	Van Horne	7 “—90 “	1736 “ “
†1906	Queen	Yonge	Spadina	7 “—90 “	3390 “ “
†1906	College	Grace	Givens	7 “—90 “	4556 “ “
†1906	Gerrard	Bridge	Munro	7 “—90 “	1600 “ “
†1906	Gerrard	Bridge	200 ft. west	7 “—90 “	328 “ “
†1907	King	Spadina	Sherbourne	7 “—90 “	200 “ “
†1907	Queen	Don	Broadview	7 “—90 “	6973 “ “
†1907	Queen	Spadina	Bathurst	7 “—90 “	1117 “ “
†1907	Queen	Kingston Rd.	Woodbine	7 “—90 “	1993 “ “
†1907	Queen	Pape	G.T. R	7 “—90 “	1887 “ “
†1907	Yonge	Bloor	C.P. R	7 “—90 “	2165 “ “
*1907	Roncesvalles	Queen	Dundas	7 “—90 “	3962 “ “
*1907	Roncesvalles	Queen	Dundas	7 “—90 “	4944 “ “
*1908	Bloor	Dufferin	Lansdowne	7 “—90 “	494 “ “
†1908	College	Spadina	McCaul	7 “—90 “	1956 “ “
†1908	Front	Yonge	Church	7 “—90 “	1697 “ “
†1908	Front	York	Simcoe	7 “—90 “	950 “ “
†1908	King	Spadina	Bathurst	7 “—90 “	630 “ single
†1908	Queen	Bathurst	Dundas	7 “—90 “	2020 “ double
†1908	Queen	Roncesvalles around Sun- nyside Lo- op	Don	7 “—90 “	4035 “ “
†1908	Spadina	s. s. Spadina Crescent	Bloor	7 “—90 “	490 “ “
*1908	Springhurst	Dufferin—we	st and south.	4½ “—... “	2345 “ “
					573 “ single

* T-Rail laid.

† Flange-Rail laid.

CEDAR BLOCK PAVEMENT.

Only one cedar block pavement was laid during the current year, having a mileage of 0.06 miles.

In connection with this class of pavement, 621 lineal feet of concrete curbing was constructed.

Tables Nos. 7 and 8 show in detail the quantities and cost of the cedar block pavement laid during the year.

Table No. 6 shows the sections of streets on which the final assessments for pavements have been or will be paid during the ensuing year. Many of these pavements are beyond repair.

TABLE No. 6.

LIST SHOWING DATE OF FINAL ASSESSMENT ON DIFFERENT CLASSES OF PAVEMENT.

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessment Paid.
Adelaide	York	Spadina	Asphalt	1892	1900
Adelaide	Bay	York	Cedar Block.	1899	1904
Adelaide	Yonge	Church	Asphalt	1894	1904
Afton Ave.	Lisgar	Northcote	Gravel	1898	1901
Alma	Gladstone	Dufferin	Cedar Block.	1901	1906
Amelia	Sumach	Parliament	Brick	1895	1906
Argyle	Dundas	Gladstone	Cedar Block	1895	1900
Arthur	Bathurst	Euclid	"	1898	1903
Argyle	Dundas	Shaw	"	1900	1905
Arthur	Euclid	Dundas	"	1900	1905
Avenue Rd.	Bloor	Davenport	Asphalt	1895	1905
Avenue Pl.	Avenue Rd.	Hazleton	Macadam	1901	1906
Adelaide	Yonge	Bay	Asphalt	1897	1907
Avenue Rd., T.A.	Dupont	260 ft. s. of north City limits	Brick	1903	1908
Balmuto	Bloor	Czar	Asphalt	1901	1906
Barton Ave.	Manning	Euclid	Cedar Block.	1890	1900
Barton Ave.	Palmerston	Euclid	"	1892	1897
Barton Ave.	Brunswick	Howland	"	1892	1898
Bathurst	S. side of Bridge	North Ry. Gate	"	1886	1897
Bathurst	Front	Niagara	"	1898	1903
Bay	King	Queen	Asphalt	1891	1899
Bay	Front	Esplanade	Cedar Block.	1899	1904
Beaconsfield Ave.	Queen	Afton	Gravel	1898	1901
Beaconsfield Ave.	Afton	Dundas	"	1898	1901
Beatty Ave.	King	Queen	Cedar Block.	1899	1904
Beau	Eglu	South Drive	Macadam	1900	1905

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessment Paid.
Bellwoods Ave.	Queen	Mansfield	Cedar Block	1900	1905
Beverley	Queen	College	Macadam . . .	1896	1901
Berryman	Davenport	Hazelton	Cedar Block . .	1900	1905
Birch Ave	Yonge	West terminus . . .	"	1890	1900
Bismarck Ave	Yonge	Park Road	Macadam . . .	1891	1897
Bismarck Ave	Park Rd.	East end	Cedar Block . .	1891	1897
Bleecker	Carlton	Wellesley	Asphalt	1894	1902
Blevins	Sumach	East end	Cedar Block . .	1896	1897
Bloor	Bathurst	Clinton	"	1889	1901
Bloor	Shaw	Dufferin	"	1890	1901
Bloor	Clinton	Shaw	"	1891	1901
Bloor	Dufferin	Lausdowne	"	1894	1901
Bolton Ave	Queen	Gerrard	"	1898	1903
Booth Ave	Queen	Eastern	"	1891	1896
Borden	Ulster	Bloor	"	1900	1905
Breadalbane	Yonge	St. Vincent	Macadam . . .	1902	1905
Brighton Ave	Pape	East end	Cedar Block . .	1890	1899
Broadview Ave	Withrow	Danforth	"	1890	1898
Broadview Ave	Queen	Gerrard	"	1887	1897
Broadview Ave	Gerrard	Withrow	Cedar Block . .	1887	1897
Broadview Ave	Queen	Eastern	"	1891	1896
Broadway Place	Spadina	159 ft. 3 in. west.	"	1899	1904
Brook Ave	Railway tracks	Dundas	Gravel	1898	1901
Brooke Ave	Logan	Howland	Cedar Block . .	1888	1898
Brook Ave	Dundas	1,000 ft. s. Bloor.	Macadam . . .	1901	1906
Brooklyn	Queen	Dagmar	"	1901	1906
Brunswick Ave	College	Ulster	Asphalt	1896	1906
Bruce	Shaw	Givens	Cedar Block . .	1892	1897
Berkeley	Gerrard	Carlton	Asphalt	1897	1907
Bellevue Ave	Bellevue Pl.	Oxford	Brick	1897	1907
Bulwer St.	Soho	Spadina	Cedar Block . .	1902	1907
Bathurst	King	Front	Granite Sett. T.A. pay't.	1903	1908
Cer-Howell	McAul	Simcoe	Macadam . . .	1902	1905
Cer-Howell	University	Simcoe	"	1902	1905
Casimir	St. Patrick	North to a lane . . .	Cedar Block . .	1889	1898
Cameron	Queen	Cameron Pl.	Brick on gravel	1899	1905
Carlaw Ave	Queen	Eastern	Cedar Block . .	1889	1899
Carlaw Ave	Eastern	Bay	"	1885	1897
Carlton	Sackville	Sumach	Macadam . . .	1898	1903
Carlton	Jarvis	Sherbourne	Asphalt	1894	1904
Carlyle	St. Patrick	376 feet north . . .	Cedar Block . .	1899	1904
Caroline	Queen	Eastern	"	1889	1899
Carr	Esther	End of Carr	"	1894	1899
Cecil	Spadina	Beverley	Asphalt	1894	1904
Charles	Church	Jarvis	Cedar Block . .	1897	1902
Christie	Bloor	Melville	"	1891	1898
Churchill	Term. of pavm't	136 feet east	"	1893	1898
Clara	Oak	Orford	"	1886	1896

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessment Paid.
Clarence Sq . . .	North, East and	South sides	Cedar Block .	1898	1903
Claremont	Arthur	Mansfield	"	1900	1905
Claremont	Robinson	Arthur	"	1900	1906
Classic Pl.	Huron	East end	Macadam	1897	1902
Clifford	Stafford	Strachan	Cedar Block .	1887	1897
Clinton	Mansfield	College	"	1899	1904
Cluny Ave	Roxborough	Crescent Rd.	"	1891	1897
Cluny Ave	Crescent Rd.	Rosedale	Macadam	1901	1906
Colborne	Church	West Market	Cedar Block .	1898	1903
Collahie	Gladstone	Beaconsfield	Gravel	1899	1902
Cottingham	1,350 ft. west of Yonge	Avenue Rd	Cedar Block .	1886	1896
Cottingham	Rathnally	Poplar Plains Rd.	"	1889	1899
Coolmine	Dundas	St. Anne's	Macadam	1901	1906
Crawford	Arthur	North end	Brick on gravel	1899	1905
Crescent Rd.	Yonge	Rosedale Rd	Macadam	1899	1904
Crocker	Bellwoods	Claremont	Cedar Block .	1890	1900
Czar	Yonge	North	Asphalt	1893	1901
Concord	College	Dewson	Cedar Block .	1901	1906
Carlton Ave.	Ontario	222 feet east	Asphalt	1897	1907
Carlton St	Sumach	399½ feet east	Brick	1902	1907
Cross	Beaconsfield	Gladstone	Brick	1902	1907
Concord Ave.	Dewson	180 ft. south Hep- bourne	Cedar Block .	1902	1907
Clarence	Wellington	218½ ft. north	Brick	1903	1908
College	Bathurst	Lansdowne	Cedar Block .	1903	1908
Church	Front	Esplanade	"	1903	1908
Cowan	King	Queen	Asphalt	1898	1908
Colborne	Yonge	Church	"	1898	1908
Carlton	Yonge	Jarvis	"	1898	1908
D'Arcy	McCauley	Spadina	Cedar Block .	1895	1900
Darling	North term	End of sewer	"	1891	1896
Davenport Rd	Yonge	Hazelton	Macadam	1898	1903
Davenport Rd	Avenue Rd.	636 feet west	"	1900	1905
Davies Ave.	Queen	Matilda	Cedar Block .	1894	1899
Defoe	Tecumseth	Niagara	"	1890	1900
Delaware Ave	College	Bloor	"	1892	1897
Delaware Ave	Bloor	Van Horne	"	1891	1897
Devonshire Pl.	Hoskin	Bloor	Asphalt	1892	1902
Dewson	Ossington	Dovercourt	Cedar Block .	1890	1900
Division	Spadina	Huron	Macadam	1899	1904
Dovercourt Rd	Bloor	Van Horne	Cedar Block .	1891	1901
Dovercourt Rd	Queen	Dundas	Gravel	1898	1901
Dovercourt Rd	Dundas	Churchill	Cedar Block .	1900	1906
Dovercourt Rd	College	Bloor	"	1901	1906
Dufferin	Peel	Dundas	Gravel	1898	1901
Dufferin	King	G.T.R	Cedar Block .	1889	1898
Dufferin	Bloor	Union	"	1891	1901

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessment Paid.
Dufferin	Dundas	Lindsay	Macadam	1899	1904
Dunn Ave.	Queen	Lake	Gravel	1898	1901
Dunbar Rd.	Elm	South Drive	Cedar Block.	1890	1900
Dundas	Sorauren	Bloor	"	1893	1898
Dundas	Ossington	Lansdowne	"	1900	1905
Dupont	Bathurst	Manning	"	1892	1897
Dovercourt Rd.	Queen	Armour	Brick	1902	1907
Duncan	King	Adelaide	"	1902	1907
Dean	Wilton	204 ft. north	Cedar Block.	1902	1907
Delaney Cres.	Brock	Wyndham	"	1902	1907
Dufferin	Bloor	C.P.R.	Macadam	1906	1907
Davenport	636 ft. e.Avenue Rd.	Dupont	"	1906	1907
Drummond Pl.	Adelaide	198 ft. north	Brick	1903	1908
Dovercourt Rd.	Churchill	College	Cedar Block.	1903	1908
Earnbridge	Strickland Pl.	100 ft. west	Macadam	1901	1906
Earl	Sherbourne	West term	Asphalt	1893	1898
Elgin Ave.	Avenue Rd.	Bedford Rd.	Macadam	1899	1904
Elliott	Broadview	Bolton	Cedar Block.	1898	1903
Elm Grove	King	Queen	Gravel	1898	1901
Elm	Yonge	University	Macadam	1899	1902
Empress Cres.	Dowling	Jamieson	Cedar Block.	Parkdale	1897
Empress Cres.	Dunn	Jamieson	"	1893	1898
Euclid Ave.	Arthur	College	"	1897	1902
Euclid Ave.	Bloor	Follis	"	1890	1898
Euclid Ave.	Arthur	Robinson	"	1899	1904
Euclid Pl.	Euclid Ave.	East term	"	1893	1899
Evans Ave.	Clinton	West term	"	1892	1898
Euclid Ave.	College	Ulster	Asphalt	1898	1908
Farquhar Lane	Front	Esplanade	Cobblestone	1900	1905
Fenning	Queen	Humbert	Brick	1897	1903
First Ave.	Broadview	Logan	Macadam	1899	1904
Florence	Dufferin	Brock	Cedar Block.	1899	1904
Frankish	Brock	Sheridan	"	1890	1899
Frizzell	Carlaw	Pape	"	1891	1900
Front	Sherbourne	Trinity	Macadam	1899	1902
Front	George	Sherbourne	"	1899	1902
Foxley	Dundas	Dovercourt	Gravel	1898	1901
Front	Yonge	Church	Asphalt	1897	1907
Front, T.A.	Simcoe	Bathurst	Brick	1903	1908
Front	Simcoe	John	Stone Paving	1903	1908
			Bl'k P'v'm't		
Foxbar	Avenue Rd.	St. Clair	Grading	1907	1908
Gerrard	Broadview	Howland	Cedar Block.	1888	1897
Gerrard	Jarvis	Sherbourne	Asphalt	1891	1901
Gerrard	Yonge	Jarvis	Macadam	1899	1904
Gildersleeve	Sumach	East end	Cedar Block.	1894	1899

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessment Paid.
Givens	Queen	Argyle	Macadam ...	1898	1903
Gladstone	Queen	Dundas	Cedar Block.	1897	1902
Gloucester	Yonge	Church	Macadam ...	1903	1906
Gordon	Sheridan	Dufferin	Cedar Block.	1891	1896
Grange	Huron	Spadina	Macadam ...	1903	1906
Grace	Arthur	College	Cedar Block.	1891	1902
Grafton Ave. ...	Roncesvalles ..	Triller	"	1891	1899
Grand Opera House Lane	Adelaide	149 feet south...	Concrete ...	1896	1902
Grange Rd.	Beverley	McCaul	Macadam ...	1900	1903
Grange Ave.	Spadina	Esther	Brick	1897	1903
Grange Ave.	Beverley	Huron	Macadam ...	1902	1905
Grenville	Yonge	Surrey Pl.	"	1899	1905
Grant	Kintyre	North term.	Cedar Block.	1890	1900
Grosvenor	Yonge	Queen's Park ...	Gravel	1900	1903
Gwynne Ave.	King	Queen	Cedar Block.	1898	1903
Givens	Argyle	Halton	"	1902	1907
Grant	Queen	Kintyre	"	1902	1907
Givens	College	Bloor	Brick	1903	1908
Halton	Shaw	Dundas	Cedar Block.	1892	1897
Hamburg Ave. ..	Bloor	Union	"	1891	1899
Hamilton	Paul	Elliott	"	1890	1899
Hamilton	Queen	Paul	"	1891	1896
Harbord	Huron	Bathurst	"	1897	1902
Harbord	St. George	Huron	Macadam ...	1898	1903
Henderson	Clinton	Grace	Cedar Block.	1891	1898
Henderson	Manning	Clinton	"	1900	1905
Herrick	Bathurst	Lippincott	"	1892	1897
Heward Ave.	Queen	Eastern Ave.	"	1889	1899
Henry	College	Baldwin	Brick	1896	1906
Hickson	St. Clarens	294 feet east ...	Macadam ...	1900	1905
High Park Ave. ..	Roncesvalles ..	High Park	Cedar Block.	1893	1899
Hoskin Ave.	St. George	Q's Pk Cr. Drive	Asphalt	1894	1904
Howard Park Av. .	Dundas	Roncesvalles	Cedar Block.	1891	1901
Howie	Clark	North end	"	1889	1899
Humbert	Dovercourt	Dundas	"	1898	1903
Huntley	Bridge	Elm	"	1890	1900
Huron	Phoebe	Grange	"	1893	1898
Huron	Bernard	Dupont	Macadam ...	1901	1906
Howard	Sherbourne	Parliament	Asphalt	1898	1908
Isabella	Sherbourne	Jarvis	Macadam ...	1898	1901
Isabella	Yonge	Jarvis	"	1901	1906
Jarvis	King	Queen	"	1896	1899
Jarvis	Queen	Bloor	Asphalt	1889	1899
John	King	Queen	Cedar Block.	1890	1900
John	King	Front	Macadam ...	1895	1899
John	Bridge	Lake	"	1898	1903

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessment Paid.
Johnston's Lane	Adelaide	South end	Brick	1897	1903
Jordan	Wellington	King	Asphalt	1891	1899
Jameson Ave.	King	Queen	"	1898	1908
Jameson Ave.	King	G.T.R.	"	1898	1908
King	334 ft. west of Jefferson.	1,900 ft. east	Tamarac	1891	1899
King	Simcoe	Sherbourne	Asphalt	1893	1903
King	Berkeley	236 ft. e. River.	Cedar Block.	1901	1906
Lane s. King	e.s. Leader Lane	End of Lane	Concrete	1895	1905
Lane bet. St. Patrick & D'Avey	Huron	Beverley	Cedar Block	1892	1897
Lane s. Pearl	Near Simcoe		Cobble	1892	1897
Lane e. of Spadina.	Grange	St. Patrick	"	1892	1897
Lane s. of Pearl.	Simcoe	York	"	1892	1897
Lane bet. Yonge and Victoria.	Gould	Wilton	"	1887	1897
Lane bet. Yonge and Victoria.	Adelaide	106 ft. south	"	1892	1897
Lane bet. York and Simcoe.	North of Pearl	Near Adelaide	Cedar Block.	1888	1898
Lane 1st north of Queen.	Mutual	Jarvis	"	1888	1898
Lane n. of Wilton Cres.	Pembroke	George	"	1888	1898
Lane bet. Queen and Richmond	Church	East terminus	Cobble	1888	1898
Lane 1st west of Yonge.	Temperance	n.s. Adelaide	Asphalt	1896	1906
Lane lying bet. Temperance & Adelaide St.	Comm'cing at a Yonge St., th	point 89 $\frac{1}{2}$ ft. w. of ence w. 313 $\frac{1}{2}$ ft.	"	1896	1906
Lane s. of Queen	Tecumseth	Niagara	Cobble	1893	1898
Lane rear of John	Adelaide	Lane n. of Arlington Hotel.	Cedar Block.	1892	1898
Lane e. of Bay.	Wellington	214 ft. south	"	1888	1899
Lane 1st e. of Bay	Wellington	Melinda	Concrete	1895	1900
Lane n. of Foxley	Foxley	135 ft. north	Cedar Block	1889	1899
Lane 1st s. of Q'n	Simcoe	Duncan	"	1889	1899
Lane bet. Borden and Lippincott	Ulster	Bloor	"	1891	1896
Lane rear Standard Bank.			Scoria	1892	1902
Lane rear Inland Revenue Office			Asphalt	1893	1901
Lansdowne	Queen	Union	Gravel	1898	1901
Lansdowne	Dundas	Bloor	Cedar Block.	1889	1899
Leader Lane	King	Colborne	Asphalt	1895	1905

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessment Paid.
Leader Lane	Wellington	Colborne	Asphalt	1896	1906
Leslie	Queen	Ashbridge's Bay	"	1891	1901
Linden	Sherbourne	Huntley	"	1893	1901
Lippincott	Nassau	College	Cedar Block.	1900	1905
Lisgar	Queen	Afton	Gravel	1897	1900
Lisgar	Dundas	Afton	"	1898	1901
Lobb	Shaw	Crawford	Cedar Block.	1890	1900
Logan Ave	Queen	Ashbridge's Bay	"	1889	1898
Logan Ave	Gerrard	Danforth	"	1889	1899
Lorne	Front	Esplanade	"	1899	1904
Lucas	Sorauren	Roncesvalles	"	1892	1897
Lane 1st south of King.	Church	218 ft. west	Concrete	1902	1907
Leonard Ave	Bellevue	Nassau	Brick	1898	1908
Lansdowne Ave.	Bloor	College	Cedar Block.	1903	1908
Lane 1st west of Bay.	s. Wellington	e Bay	Brick	1903	1908
Lampport	Crescent Rd	439 ft. east	Tar Macadam	1905	1908
McAlpine	Davenport	McMurrich	Cedar Block.	1891	1897
McCaul	Queen	College	"	1898	1903
McDonnell	Queen	2,826 ft. north	Gravel	1898	1901
McDonnell Sq.	Bathurst	Defoe	Macadam	1900	1903
McMaster Ave	Avenue Rd.	Rathmally	Cedar Block.	1890	1900
McPherson Ave.	Rathmally	Poplar Plains Rd.	"	1890	1901
McPherson Ave.	Yonge	1,330 ft. west	Macadam	1899	1904
Manning Ave	Robinson	Queen	Cedar Block.	1889	1898
Manning Ave	Bloor	Hammond Pl.	"	1890	1900
Manning Ave	Arthur	College	"	1900	1905
Manning Ave	Robinson	Arthur	"	1901	1906
Mansfield	Clinton	Bellwoods	"	1900	1905
Mansfield	Manning	Clinton	"	1893	1898
Mansfield	Bellwoods	Grace	"	1893	1899
Maple Grove	O'Hara	Brock	"	1899	1904
Maple	Glen	Sherbourne	Macadam	1900	1905
Marion	Lansdowne	McDonnell	Cedar Block.	1891	1899
Markham	Herrick	Bloor	"	1889	1898
Margueretta	Dundas	Bloor	"	1901	1906
Marion	Fuller	Sorauren	"	1901	1906
Massey	King	Queen	"	1891	1897
Maude	Adelaide	Farley	"	1887	1897
Melbourne Ave.	Cowan	Dufferin	Gravel	1897	1900
Melinda	Yonge	Bay	Asphalt	1891	1899
Metcalfe	Winchester	Amelia	Cedar Block.	1900	1905
Millstone Lane.	York	East end	"	1889	1899
Munn Lane	Wellington	218 ft. north	Asphalt	1893	1901
Morse	Queen	2,103 ft. southerly	Cedar Block.	1901	1906
Murray	Cler Howell	North end	"	1898	1903
Middleton	Brock	Sheridan	"	1892	1897

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessment Paid.
Napier.....	Munro.....	Lane	Cedar Block.	1891	1896
Nassau.....	Lippincott	Bathurst	"	1899	1904
New.....	Davenport Rd..	West end	"	1889	1899
North.....	St. Mary.....	Bloor	Macadam ..	1900	1905
Northeote.....	Queen.....	Afton	Cedar Block.	1895	1900
Northumberland	Ossington	Preston	"	1893	1898
Noble.....	Queen	100 ft. w. Strick- land Pl.	Macadam ..	1901	1906
Nassau	Spadina	Bellevue Ave ..	Brick	1897	1907
Nassau	Bellevue	Lippincott	"	1898	1908
O'Hara	1605 ft. north of Queen.	Railway Tracks ..	Cedar Block.	1892	1897
O'Hara	Queen	1,455 ft. north ..	Gravel	1898	1901
Olive	Bathurst	Palmerston	Cedar Block.	1893	1898
Ontario Place...	Ontario	270 ft. west ..	"	1886	1896
Ontario	Carlton	Howard	Asphalt	1890	1900
Osler	Royce	C. P. R. tracks ..	Cedar Block.	1892	1898
Ossington	Bloor	C. P. R. tracks ..	"	1892	1897
Ossington	Harrison	College	"	1888	1899
Ossington	College	Bloor	"	1900	1905
Oxford	Augusta	Spadina	"	1895	1900
Oxford	Augusta	Lippincott	"	1899	1905
Palmerston	Robinson	Arthur	"	1900	1905
Palmerston	Bloor	Dupont	"	1890	1899
Pape Ave	Queen	Danforth	"	1887	1897
Parliament.....	Wellesley.....	Howard	"	1888	1895
Parliament.....	Queen	Gerrard	Macadam ..	1899	1904
Parliament.....	King	Mill	"	1901	1906
Pearson	Sorauren.....	Roncesvalles	Cedar Block.	1901	1906
Peel	Gladstone	Dufferin	Gravel	1898	1901
Pembroke.....	Shuter.....	Wilton	Macadam ..	1899	1902
Pembroke.....	Wilton	Gerrard	"	1903	1906
Perth Ave	Bloor	Royce	Cedar Block.	1893	1898
Peter	Front	Wellington.....	"	1886	1897
Peter	King	Queen	"	1890	1900
Pinehill Road...	Rosedale Rd..	West end	Macadam ..	1894	1899
Poulett	Sydenham	South term ..	Cedar Block.	1890	1896
Powell	Dale	Maple	Macadam ..	1901	1906
Prospect.....	Rose	Ontario	Cedar Block.	1889	1899
Pearl	York	633 feet east ..	Brick	1902	1907
Peter	King	Wellington.....	Cedar Block.	1903	1908
Park Road	Collier	South Drive ..	Macadam Rd.	1907	1908
Queen	G. T. Ry.	Pape	Cedar Block.	1900	1905
Queen	Pape	Greenwoods	"	1900	1905
Queen	Gwynne	Roncesvalles	"	1898	1903
Queen	Gladstone	Niagara	"	1898	1903
Queen	Yonge	River	Asphalt	1894	1904

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessment Paid.
Queen's Park Drive.	Queen's Park Cres.	Bloor	Macadam ...	1898	1903
Queen's Pk. Cr. Drive, e.s.	University Cres	Road running n. from Park.	"	1897	1900
Queen St. Tracks	Greenwood	Woodbine	Brick	1902	1907
Queen	John	Bathurst	Asphalt	1898	1908
Renfrew Place..	McCaul	East end	Cedar Block.	1889	1899
Richmond Place	Richmond	South end	"	1886	1896
Richmond.....	Bay	York	Macadam ..	1897	1900
Richmond.....	Victoria	Bay	Asphalt	1893	1901
River.....	Gerrard	Spruce	Macadam ..	1900	1905
Robinson	Palmerston....	Euclid	Cedar Block.	1886	1896
Rolyat.....	Dundas	Grove	"	1899	1904
Roncesvalles...	Queen	Dundas	"	1890	1900
Rose Ave	Howard	Winchester ..	Asphalt	1892	1900
Roseberry Ave..	Bathurst	East end	Cedar Block.	1894	1899
Rossin H'se lane	York	East end	Cobble	1891	1897
Roxborough Ave	Yonge	1,328 feet w ...	Cedar Block.	1892	1897
Roxborough Ave	Yonge	2,180 feet e. ...	"	1891	1900
Royce Ave	Symington Ave.	C. P. R.....	"	1893	1898
Rush Lane	Esther	Portland	"	1890	1900
Rusholme Rd ..	Hepbourne	Bloor	"	1890	1900
Russell	St. George	Spadina	"	1899	1904
Robinson	Palmerston ..	Euclid	"	1903	1908
St. Alban's.....	Yonge	Surrey Place ...	Macadam ..	1903	1906
St. Alban's.....	Surrey	Queen's Park....	"	1898	1903
St. Clarens Ave.	Wyndham	Dundas	Cedar Block.	1889	1898
St. Clarens Ave.	Dundas	College	"	1890	1900
St. George.....	College	Bloor	Asphalt	1891	1901
St. James' Ave..	Ontario	Parliament	"	1892	1899
St. Joseph	St. Vincent ..	698½ feet w. ...	Macadam ..	1901	1906
St. Patrick	Bathurst	Denison	Cedar Block.	1898	1903
St. Patrick	Beverley	McCaul	Asphalt	1895	1905
St. Mary's	Yonge	W. end St. Mary's	Macadam ..	1900	1905
Sackville	Gerrard	Carlton	Cedar Block.	1899	1904
Sackville	Wellesley	256 feet north ..	Macadam ..	1899	1904
Sackville	Wellesley	Winchester	"	1899	1904
Salisbury Ave..	Sackville	East term	Cedar Block.	1886	1897
Scollard.....	Yonge	Hazelton	Cd. Bl. & B'ck in track.	1898	1903
Scott	Front	Colborne	Asphalt ..	1890	1900
Selby.....	Sherbourne ..	Huntley	Brick	1895	1905
Shaw.....	Arthur	College	Cedar Block.	1900	1905
Shaw.....	College	Bloor	"	1893	1898
Shaw	Queen	Defoe	"	1891	1901
Shaw.....	Queen	Arthur	"	1898	1903
Shaftesbury Ave	Yonge	1,100 feet east ..	"	1890	1899
Sussex Ave	Spadina	St. George	Asphalt ..	1898	1908

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessment Paid.
Spencer Ave.	King	Springhurst	Asphalt	1898	1908
Sherbourne	Front	Esplanade	Brick	1903	1908
Sheridan Ave.	Florence	Dundas	"	1903	1908
Simach	King	Eastern Ave	Tar Macad'm	1905	1908
Sheppard	Adelaide	Richmond	Macadam	1895	1899
Sherbourne	Bridge	South Drive	Asphalt	1891	1901
Sherbourne	King	Queen	"	1890	1899
Sherbourne	Queen	Bloor	"	1889	1899
Shirley	Brook	St. Clarens	Cedar Block	1891	1898
Shuter	Yonge	Sherbourne	Macadam	1901	1904
Simcoe	Front	Station	Cedar Block	1896	1901
Simcoe	King	Queen	Asphalt	1890	1900
South Drive	Crescent Rd.	Scarth Rd	Macadam	1893	1898
South Drive	e.s South Drive running s.	Glen Rd.	"	1899	1904
Spadina	Front	King	"	1900	1905
Spadina	Queen	Adelaide	Cedar Block	1899	1904
Spadina Rd	Bernard	C.P.R.	"	1891	1901
Spruce	River	Simach	Macadam	1899	1904
Sully	Arthur	College	"	1901	1906
Sully Cres.	Shaw	Sully	Cedar Block	1899	1904
Sumach	King	Eastern	"	1890	1899
Sumach	Gerrard	Wellesley	Macadam	1899	1904
Sumach	King	Gerrard	Cedar Block	1900	1905
Strickland Pl.	Noble	Earnbridge	Macadam	1900	1905
Sword	Gerrard	Spruce	"	1899	1904
St. Joseph	Yonge	St. Vincent	Brick	1897	1907
St. Clarens	College	Bloor	Cedar Block	1902	1907
Temperance	Yonge	Bay	Macadam	1896	1899
Teraulay	Queen	Albert	"	1898	1903
Thompson	Davies	Munro	Cedar Block	1890	1900
Tecumseth	Queen	Walnut	"	1901	1906
Toronto	N. King	Adelaide	Asphalt	1892	1897
Trinity	Mill	King	Cedar Block	1900	1905
Tyndall Ave.	King	Springhurst	Macadam	1898	1900
Turner Ave.	Tecumseth	418½ ft. west	Brick	1903	1908
Ulster	Major	Bathurst	Cedar Block	1900	1905
Ulster	Bathurst	Markham	"	1894	1899
Vanauley	Queen	Grange	"	1886	1897
Vanauley	St. Patrick	St. Andrew	"	1887	1897
Victor Ave	Logan	Broadview	Macadam	1899	1904
Victoria	Adelaide	Queen	Asphalt	1895	1905
Victoria Lane	Queen	Shuter	Cobble	1890	1899
Virtue	Sorauren	East terminus	Cedar Block	1890	1900
Victoria	King	Adelaide	Asphalt	1892	1900
Vermont	Palmerston	Manning	Cedar Block	1891	1896

Street.	From.	To.	Class of Pavement.	Date When Laid.	Date Final Assessment Paid.
Walmer Rd. . . .	Bloor	Lowther	Cedar Block.	1897	1902
Walmer Rd. . . .	Lowther	Castle	"	1898	1903
Walton	Yonge	Elizabeth	Macadam	1902	1905
Wascana	Sumach	186 feet east . . .	Cedar Block.	1891	1896
Washington	Spadina	Huron	Macadam	1899	1904
Wellesley Cres. . .	Sherbourne	Jarvis	"	1898	1901
Wellesley	Sumach	300 ft. east	Cedar Block.	1889	1899
Wellesley	Parliament	Sumach	Macadam	1899	1904
Wellesley	Sherbourne	Parliament	Asphalt	1894	1904
Wellington Ave. . .	Bathurst	East terminus . . .	Cedar Block.	1891	1901
Wellington	Church	Yonge	Asphalt	1889	1899
Wellington	Bay	York	"	1891	1899
West Lodge.	Merrion Pl.	1,146 ft. north . . .	Cedar Block.	1889	1904
Westmoreland . . .	Durham	Union	"	1890	1900
Westmoreland . . .	Bloor	Durham	"	1890	1900
Wilkens	King	North terminus. . .	"	1888	1899
Winchester	Parliament	Sumach	Asphalt	1893	1901
Withrow Ave. . . .	Broadview	1,060 ft. east . . .	Cedar Block.	1889	1898
Wilton	Sherbourne	Parliament	Macadam	1901	1906
Wolsely	Esther	Bathurst	Tar Macadam . .	1900	1905
Wolfrey	Broadview	Bowden	Cedar Block.	1888	1899
Wright Ave.	McDonnell	Sorauren	"	1891	1899
Wardell	DeGrassi	South Ave.	"	1902	1907
Wyndham	Brook	St. Clarens.	"	1902	1907
Wilcox.	St. George	Robert	Asphalt	1898	1908
Yonge	Grenville	Bloor	"	1892	1902
Yonge	King	Hayter	"	1892	1902
Yonge	Hayter	Grenville	"	1892	1902
Yorkville	Yonge	Avenue Rd.	Cedar Block.	1896	1901
York	Pearl	Adelaide	Brick	1902	1907
York	Queen	Adelaide	"	1902	1907
York	King	Front	Asphalt	1898	1908
Yonge	Bloor	Davenport	"	1898	1908
York St. Bridge. . .			Sq. Pine Bl'k Pavement.	1903	1908

BITULITHIC PAVEMENTS.

During the year there was constructed a total mileage of 5.326 miles of bitulithic pavement. This is an increase of 0.918 miles over the amount laid in 1907. The total yardage laid was 80,539 square yards.

In conjunction with bitulithic pavements, there was constructed during the year 23,333 lineal feet of concrete curbing and gutter.

Details of bitulithic pavements are to be found in Table No. 7.

MACADAM ROADWAYS.

There were constructed during the year 3 new macadam roadways, all of which were short, and 2 reconstructions. These five roadways have a mileage of 0.973 miles, representing 12,317 square yards. As the mileage for 1907 was 1.434 miles, an appreciable decrease in this class of pavement is apparent.

It is interesting to note the decrease in macadam roadways constructed from year to year, and when it is considered that at the same time a number of worn-out macadamms are being torn up and replaced with pavements of a permanent character, it is quite evident that these dirty and unsatisfactory roads are being eliminated.

In conjunction with macadam roadways 695 lineal feet of concrete curbing was placed.

Tables No. 7 and 8 show details.

CONCRETE PAVEMENTS.

During the year 8 concrete pavements were constructed, representing a mileage of 0.553 miles, which is 0.105 miles in excess of the amount laid the previous year.

In all but one instance these pavements were laid on lanes, and the remaining one on a street which was but lightly travelled.

This class of pavement has given excellent satisfaction for lightly travelled thoroughfares, being permanent and readily cleaned.

The first cost is also considerably less than that of any other permanent pavement, with the possible exception of asphalt.

2,724 lineal feet of concrete curbing was laid in conjunction with concrete pavements during the year.

Tables No. 7 and 8 give details.

CONCRETE SIDEWALKS.

A total of 496 concrete sidewalks were constructed during the year, 430 of which were constructed under the Local Improvement System, the remaining 66 being put down by private contract under the supervision of this Department. The total mileage laid was 55.101 miles, which is a decrease of 3.208 miles when compared with the mileage laid during 1906.

RECORD OF CEMENT TESTS, FROM JULY 1ST, 1907, TO JULY 1ST, 1908.

Brand.	No. of Samples Tested.	No. of Samples Rejected.*	Soundness, Falt Test.	Specific Gravity.	Fineness, Residue on Sieves.				Setting in Minutes.		Percentage of Water Used in Mixing.		Tensile Strength in Pounds per Square Inch.						Remarks.					
					No. 70.	No. 100.	No. 200.	Initial.	Final.	Neat.	3 to 1.	Neat.			3 to 1.									
												24 Hours.	7 Days.	28 Days.	3 Months.	1 Year.	24 Hours.	7 Days.		28 Days.	3 Months.	1 Year.		
Belleville	16	0	O.K.	3.138	2.8	6.9	20.1	137	402	20.4	10.0	334	621	696	701	717	803	746	102	256	380	385	395	Canadian.
Colonial	16	0	O.K.	3.120	2.5	7.0	22.5	155	428	21.0	10.0	226	701	773	701	717	803	746	82	261	330	385	395	"
Hercules	9	0	O.K.	3.152	3.0	8.0	22.5	188	421	20.0	10.0	244	629	773	629	773	690	746	78	250	311	385	395	"
Imperial	16	1	6.4% failed	3.162	1.4	4.8	19.6	186	403	20.2	10.0	300	589	679	690	679	690	746	87	242	300	298	298	"
International	16	0	O.K.	3.145	1.7	5.0	18.9	123	425	20.5	10.0	348	606	653	606	653	690	746	91	270	375	465	349	"
Maple Leaf	4	0	O.K.	3.132	1.3	5.1	19.0	184	436	20.0	10.0	215	578	697	578	697	792	607	88	276	352	465	349	"
Monarch	180	0	O.K.	3.109	2.5	6.2	19.7	106	396	20.4	10.0	337	588	675	588	675	709	640	108	297	389	549	400	"
National	197	0	O.K.	3.165	2.1	6.6	21.2	172	419	20.0	10.0	222	584	729	584	729	892	744	80	236	336	428	416	"
Samsou	8	0	O.K.	3.174	1.3	4.9	19.4	181	424	21.5	10.0	339	633	799	339	633	799	744	99	276	377	465	349	"
Sageen	14	2	O.K.	3.134	0.4	5.5	19.7	170	349	20.5	10.0	339	632	691	339	632	691	520	96	294	346	336	316	"
Star	168	3	O.K.	3.136	3.1	7.6	22.3	164	428	21.0	10.0	309	515	594	309	515	594	647	103	239	334	380	385	"
Sun	4	0	O.K.	3.127	0.0	4.3	18.0	205	434	21.0	10.0	390	689	766	390	689	766	746	123	285	353	380	385	"
Superior	12	0	O.K.	3.150	2.2	4.2	13.1	222	420	20.5	10.0	268	574	644	268	574	644	746	93	218	270	270	270	"
	622	6																						

*Some of the samples rejected were held over and when sufficiently aged were allowed to be used.



The length of the guaranteed period on concrete walks was reduced this year from 5 years to 18 months. The result of this change is that more contractors tendered on sidewalks this season than formerly. The tendered prices also dropped considerably.

The total length of concrete walks in the City is now 340,919 miles

In connection with concrete sidewalks 119,064 lineal feet of concrete curbing was laid during the year.

PLANK SIDEWALKS.

The following is a list of the plank sidewalks constructed as Local Improvements during 1908:

Street.	Side.	From.	To.	Length.	Width	Cost.
						\$ c.
Eastern Ave ..	South.	400 ft. west of Morley	Knox	904	feet 4 feet	434 86
Hunter	South.	Jones	Leslie	640	feet 4 feet	300 73
Lenty Ave.....	West.	101 ft. south of Violet	450 ft. fur. s. ...	450	feet 4 feet	204 29
Lee Ave.....	East.	Violet Ave....	South end ...	583	feet 4 feet	230 85
O'Connell Ave.	South.	Brock Ave....	East end	265	feet 4 feet	97 42
Shaw Place....	South.	Shaw St	144 ft. 6 in. e. of Ossington. ...	489	feet 5½ feet	339 44
Shaw Place....	South.	Ossington	144 ft. 6 in. e. 144½	feet 5½ feet		100 94
Violet Ave ...	South.	Lee Ave	Lenty	355	feet 4 feet	140 46
Walnut Ave ..	West.	Queen St ...	Clifford.	342	feet 4 feet	120 82

DAY LABOR WORKS.

During the year 1908, 430 concrete and 2 brick sidewalks were constructed, of which 15 concrete walks and the 2 brick walks were done by day labor. Of these 14 were ordered by Council to be done by day labor without the formality of calling for tenders, and the rest, 63 in number, were awarded to the City Engineer, he being the lowest tenderer. On 32 other walks the City Engineer's tender was found to be the lowest, but at the request of the next lowest tenderer, he was allowed to do the work under the supervision of this Department, and at the City Engineer's figures, thus effecting a substantial saving to the property owners. The walks constructed under this system aggregated 7½ miles, as compared with 10½ miles in 1907.

In estimating the gain or loss resulting from the day labor system, if we take the lowest contractor's tender as a basis of comparison on the walks for which tenders were invited, we find an actual gain of \$4,524.07 on an actual expenditure of \$34,452.42.

The total cost of sidewalks constructed under the day labor system during 1908, exclusive of interest on the money, etc., was \$34,452.42, as compared with \$57,608.77 in 1907.

The total cost of sidewalks done by order of Council was \$6,021.70 as against an estimated cost of \$8,228.

Table No. 10 gives widths, amount of City's tender, next lowest tender, actual cost of the work, and loss and gain in comparison with contractors' tenders.

During the year we were awarded contracts by tender for the construction of 19 asphalt pavements, 3 macadam pavements, 3 asphalt block pavements, 9 vitrified block pavements on concrete, 4 brick pavements on concrete, 2 concrete pavements, 16 concrete curbs and 1 grading.

In addition to the above, 2 macadam pavements, 1 cedar block pavement on concrete, 1 track allowance pavement, 1 curb and 1 grading were done by order of Council.

On these works a net gain of \$25,380.80 was effected on an actual expenditure of \$134,414.84. (See Table No. 11.)

The total cost of roadway work done by order of Council was \$23,936.12, as against an estimated cost of \$32,582.

Table No. 14 gives details of curb contracts completed during 1908.

Total cost of Local Improvement pavement work done was \$121,329.84.

The total expenditure of this Department for Local Improvement and track allowance work was \$168,867.26.

A reference to Tables Nos. 10 and 11 will show a saving in favor of property abutting on streets on which sidewalks were constructed by day labor during 1908 of \$5,123.86, and a saving of \$25,380.80 due to the construction of pavements. In addition, credit is claimed for a saving of \$2,896 on 32 sidewalks, 15 pavements, and 66 curb contracts.

Sample No.	Surface texture.	Refined Asphalt.										Sand Grading.										Limestone Dust Grading.			
		Chemical Analysis.										Sand Grading.										Limestone Dust Grading.			
		Flowing Point.	Specific Gravity.	Bismuth soluble in Carbon Bisulphide.	Organic matter insoluble	Mineral matter (Ash).	Bismuth soluble in 88% Naphthalene.	Bismuth soluble in Carbon Tetrachloride.	Fixed Carbon.	On No. 10 Sieve.	Pass No. 10 Sieve.	Pass No. 20 Sieve.	Pass No. 30 Sieve.	Pass No. 40 Sieve.	Pass No. 50 Sieve.	Pass No. 80 Sieve.	Pass No. 100 Sieve.	Pass No. 200 Sieve.	On No. 50 Sieve.	Pass No. 80 Sieve.	Pass No. 100 Sieve.	Pass No. 200 Sieve.			
Min. ° F.				%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%			
250	203	1.081	94.33	3.16	2.51	64.69	91.56	11.05	9.07	4.0	11.5	21.0	27.0	19.5	10.5	6.0	2.0	7.0	84.0						
206	193	1.017	99.48	0.45	0.07	85.05	98.77	9.07	9.07	0.0	7.5	18.0	35.0	24.5	9.0	4.5	2.0	6.0	82.0						
250	228	1.074	93.33	3.93	2.74	63.43	92.70	14.74	14.74	0.0	6.0	12.0	26.0	24.5	21.0	9.0	2.0	4.0	76.0						
230	165	1.043	99.71	0.27	0.02	76.27	98.73	14.04	14.04	0.0	5.0	8.5	21.0	40.0	16.0	7.5	2.0	8.0	70.0						
300	176	1.045	99.84	0.04	0.12	73.74	93.49	16.83	16.83	0.0	2.5	5.0	20.5	17.5	32.0	11.0	0.0	4.0	76.0						
260	176	1.045	99.84	0.04	0.12	73.74	93.49	16.83	16.83	0.0	1.5	6.0	25.0	24.0	20.5	9.0	0.0	4.0	76.0						
207	207	1.020	99.37	0.63	0.02	69.38	98.08	14.90	14.90	0.0	1.0	6.0	10.5	26.5	21.0	10.0	0.0	4.0	78.0						
240	165	1.043	99.71	0.27	0.02	76.27	98.73	14.04	14.04	0.0	1.0	4.5	10.5	26.5	21.0	10.0	0.0	4.0	70.0						
257	257	1.015	99.98	0.02	0.04	67.09	99.89	17.85	17.85	0.0	3.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
245	199	1.070	99.86	0.10	0.04	67.09	99.89	17.85	17.85	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
250	228	1.074	93.33	3.93	2.74	63.43	92.70	14.74	14.74	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
275	204	1.078	94.30	2.95	2.55	63.84	93.97	13.85	13.85	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
220	165	1.036	99.40	0.42	0.18	78.45	97.35	12.93	12.93	0.0	0.5	1.0	8.0	26.5	16.0	7.0	0.0	4.0	74.0						
250	204	1.078	94.30	2.95	2.55	63.84	93.97	13.85	13.85	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
246	181	1.045	99.80	0.06	0.26	74.97	99.30	14.00	14.00	0.0	1.0	7.0	13.5	25.0	24.0	18.0	5.0	4.0	74.0						
256	208	1.074	93.33	3.93	2.74	63.43	92.70	14.74	14.74	0.0	1.0	6.0	10.5	26.5	21.0	8.5	0.0	4.0	76.0						
207	207	1.020	99.37	0.63	0.02	69.38	98.08	14.90	14.90	0.0	1.0	5.5	10.0	26.0	26.5	21.0	10.0	0.0	4.0	78.0					
220	165	1.043	99.71	0.27	0.02	76.27	98.73	14.04	14.04	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
257	257	1.015	99.98	0.02	0.04	67.09	99.89	17.85	17.85	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
245	199	1.070	99.86	0.10	0.04	67.09	99.89	17.85	17.85	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
250	228	1.074	93.33	3.93	2.74	63.43	92.70	14.74	14.74	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
275	204	1.078	94.30	2.95	2.55	63.84	93.97	13.85	13.85	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
220	165	1.036	99.40	0.42	0.18	78.45	97.35	12.93	12.93	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
250	204	1.078	94.30	2.95	2.55	63.84	93.97	13.85	13.85	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
246	181	1.045	99.80	0.06	0.26	74.97	99.30	14.00	14.00	0.0	1.0	6.0	10.5	26.5	21.0	8.5	0.0	4.0	76.0						
256	208	1.074	93.33	3.93	2.74	63.43	92.70	14.74	14.74	0.0	1.0	5.5	10.0	26.5	21.0	10.0	0.0	4.0	70.0						
207	207	1.020	99.37	0.63	0.02	69.38	98.08	14.90	14.90	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
220	165	1.043	99.71	0.27	0.02	76.27	98.73	14.04	14.04	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
257	257	1.015	99.98	0.02	0.04	67.09	99.89	17.85	17.85	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
245	199	1.070	99.86	0.10	0.04	67.09	99.89	17.85	17.85	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
250	228	1.074	93.33	3.93	2.74	63.43	92.70	14.74	14.74	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
275	204	1.078	94.30	2.95	2.55	63.84	93.97	13.85	13.85	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
220	165	1.036	99.40	0.42	0.18	78.45	97.35	12.93	12.93	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
250	204	1.078	94.30	2.95	2.55	63.84	93.97	13.85	13.85	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
246	181	1.045	99.80	0.06	0.26	74.97	99.30	14.00	14.00	0.0	1.0	6.0	10.5	26.5	21.0	8.5	0.0	4.0	76.0						
256	208	1.074	93.33	3.93	2.74	63.43	92.70	14.74	14.74	0.0	1.0	5.5	10.0	26.5	21.0	10.0	0.0	4.0	70.0						
207	207	1.020	99.37	0.63	0.02	69.38	98.08	14.90	14.90	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
220	165	1.043	99.71	0.27	0.02	76.27	98.73	14.04	14.04	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
257	257	1.015	99.98	0.02	0.04	67.09	99.89	17.85	17.85	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
245	199	1.070	99.86	0.10	0.04	67.09	99.89	17.85	17.85	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
250	228	1.074	93.33	3.93	2.74	63.43	92.70	14.74	14.74	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
275	204	1.078	94.30	2.95	2.55	63.84	93.97	13.85	13.85	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
220	165	1.036	99.40	0.42	0.18	78.45	97.35	12.93	12.93	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
250	204	1.078	94.30	2.95	2.55	63.84	93.97	13.85	13.85	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
246	181	1.045	99.80	0.06	0.26	74.97	99.30	14.00	14.00	0.0	1.0	6.0	10.5	26.5	21.0	8.5	0.0	4.0	76.0						
256	208	1.074	93.33	3.93	2.74	63.43	92.70	14.74	14.74	0.0	1.0	5.5	10.0	26.5	21.0	10.0	0.0	4.0	70.0						
207	207	1.020	99.37	0.63	0.02	69.38	98.08	14.90	14.90	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
220	165	1.043	99.71	0.27	0.02	76.27	98.73	14.04	14.04	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
257	257	1.015	99.98	0.02	0.04	67.09	99.89	17.85	17.85	0.0	1.0	5.0	27.0	28.0	20.0	7.5	2.0	10.0	72.0						
245	199	1.070	99.86	0.10	0.																				

[illegible]

Street.	From.	To.	Contractor.	Asphalt used.	Bitumen in Surface Mixture (Penetration of Dow's Machine)	Temperature of Surface Mixture.		Physical Properties.	
						Max. ° F.	Min. ° F.		
									Penetration Point.
Aberdeen Ave.	Parliament St.	441 ft. west	Const'g & Pav. Co.	Bernudez	10.70	40	220	250	263
Admiral Road	21 ft. s. of n.s. Ber- nard	18 ft. w. of c.s. St. George	"	Californian	10.89	61	330	266	193
Armstrong Ave.	Duffrin St.	West end	"	Bernudez	10.37	42	320	250	228
Ann St.	Mutual St.	Yonge	Golson Con. Co.	Texas	11.22	30	360	290	165
Barton Ave.	Radhurst St.	Markham St.	City Engineer	Californian	9.46	47	330	300	176
Barton Ave.	Palmerston Ave.	Manning Ave.	"	Texas	9.46	47	300	260	176
Brock Ave.	Bloor St.	North end	Golson Con. Co.	Californian	11.20	62	310	240	207
Berkeley St.	Queen St.	Duke St.	"	Texas	11.30	60	300	245	193
Brunswick Ave.	College St.	120 ft. north	City Engineer	Californian	10.42	44	300	228	228
Barton Ave.	Christie St.	Manning Ave.	Const'g & Pav. Co.	Bernudez	9.55	53	300	250	228
Barton Ave.	Palmerston Ave.	Markham St.	"	Californian	9.35	30	321	275	204
Bolton Ave.	Queen St.	Gerrard St.	Warren Btr. Pav. Co.	Californian	9.92	59	325	229	165
Broadview Ave.	Queen St.	Eastern Ave.	Const'g & Pav. Co.	Bernudez	8.81	30	300	230	204
Broadview Ave.	Queen St.	Lausdowne Ave.	"	Californian	8.93	40	328	246	181
Bloor St.	Duffrin St.	Yarmouth Rd.	"	Bernudez	10.08	53	310	256	238
Clinton St.	Barton Ave.	Barton Ave.	Golson Con. Co.	Texas	10.65	30	320	220	207
Clinton St.	Bloor St.	Barton Ave.	"	Californian	11.14	30	350	250	228
Conduit St.	Dundas St.	West City Limits	"	Californian	10.93	30	350	240	228
College St.	Sorauren Ave.	Roncesvalles Ave.	"	Texas	11.09	43	300	240	207
Crawford St.	Bloor St.	Thorne	"	Californian	10.27	40	340	260	165
Carling Ave.	Bloor St.	North end	"	Californian	10.66	40	340	240	207
Dewson St.	Ossington Ave.	Havelock St.	"	Californian	10.66	40	340	240	165
Duke St.	Sherbourne St.	Parliament St.	Const'g & Pav. Co.	Bernudez	9.48	49	320	250	204
Delaware Ave.	Dewson St.	Bloor St.	"	Californian	9.08	51	320	250	193
Duchess St.	Jarvis St.	Sherbourne St.	Golson Con. Co.	Californian	11.80	60	330	240	257
Duchess St.	Sherbourne St.	Parliament St.	"	Texas	11.80	60	330	240	257
Dingwall Ave.	Pape Ave.	Carlisle Ave.	Barber Asph. Pav. Co.	Californian	10.46	60	380	240	257
Dundas St.	Ossington Ave.	Lausdowne Ave.	Const'g & Pav. Co.	Trinidad Pitch Lake	11.50	47	312	256	250
Dundas St.	Christie St.	Shaw St.	Golson Con. Co.	Californian	10.08	59	335	282	181
Essex Ave.	Morse St.	Carlisle Ave.	City Engineer	"	9.93	23	340	260	176
Eastern Ave.	Jameson Ave.	Dunn Ave.	Barber Asph. Pav. Co.	"	10.01	36	380	260	176
Empress Cres.	Bloor St.	Wallace Ave.	Const'g & Pav. Co.	Trinidad Pitch Lake	9.38	49	320	250	250
Emerson Ave.	Bloor St.	Wallace Ave.	Const'g & Pav. Co.	Bernudez	10.27	51	320	250	203
Emerson Ave.	Jones Ave.	Leslie St.	Barber Asph. Pav. Co.	Californian	10.27	51	320	250	193
Emily St.	King St.	Wellington St.	Golson Con. Co.	Trinidad Pitch Lake	10.45	47	315	245	257
Evans Ave.	Clinton St.	West end	Barber Asph. Pav. Co.	Californian	10.35	68	290	240	190
Euclid Ave.	Arthur St.	College St.	City Engineer	Trinidad Pitch Lake	11.46	62	320	280	250
Euclid Ave.	Robinson St.	Arthur St.	Golson Con. Co.	Californian	10.30	45	350	260	176
Franklin Ave.	Ruskin Ave.	North end	City Engineer	Californian	11.00	34	310	260	228
Franklin Ave.	Brock Ave.	Sheridan Ave.	Const'g & Pav. Co.	Californian	10.50	50	325	240	167
Gladstone Ave.	College St.	Lindsay Ave.	City Engineer	Californian	10.50	50	325	240	176
Gladstone Ave.	Roncesvalles Ave.	Sorauren Ave.	Golson Con. Co.	Bernudez	9.61	33	300	270	204
Galley Ave.	Roncesvalles Ave.	Sorauren Ave.	"	Californian	10.97	40	400	260	176
Geoffrey St.	Roncesvalles Ave.	Sorauren Ave.	Golson Con. Co.	"	9.18	52	340	250	221
Gore St.	Clinton St.	West end	City Engineer	Texas "A"	10.40	22	330	240	230
Gerrard St.	Logan Ave.	700 ft. east	City Engineer	Californian	10.20	36	340	270	176
Grace St.	1,744 ft. n. College	160 ft. further north	Golson Con. Co.	Californian	10.85	26	320	260	167
Gerrard St.	Parliament St.	River St.	Const'g & Pav. Co.	Bernudez	10.20	36	320	260	167
Gerrard St.	Dundas St.	North end	Golson Con. Co.	Californian	10.37	51	300	264	193
Gould St.	Victoria St.	Mutual St.	Const'g & Pav. Co.	Texas	10.36	38	244	260	207
Grace St.	1,494 ft. n. College	250 ft. further north	Golson Con. Co.	Bernudez	11.24	33	318	243	165
Gladstone Ave.	Bloor St.	990 ft. south	Const'g & Pav. Co.	Californian	10.20	40	310	240	208
Gladstone Ave.	Bloor St.	Van Horne St.	Golson Con. Co.	Bernudez	10.37	51	300	264	193
Gladstone Ave.	Bloor St.	Van Horne St.	"	Texas	11.68	27	360	240	228
Hamilton St.	Kinrye Ave.	Gerrard St.	Const'g & Pav. Co.	Californian	10.78	58	300	270	228
Hamilton St.	Queen St.	Gerrard St.	"	Bernudez	9.13	41	322	252	204
Havelock St.	College St.	Kinrye Ave.	Golson Con. Co.	Californian	9.13	41	322	252	204
Hallam	Shaw St.	Devereaux Rd.	Const'g & Paving Co.	Bernudez	9.66	67	320	240	199
Harbord St.	Palmerston Ave.	Clinton St.	Golson Con. Co.	Californian	10.09	43	320	230	228
Harbord St.	Stadium Ave.	Huron St.	"	Texas	10.86	33	290	280	207
Harbord St.	Dundas St.	In Inn Rd.	"	Californian	9.60	33	290	280	163
Howard Park	Queen St.	Albert St.	City Engineer	Californian	9.84	31	320	240	207
Jarvis St.	Queen St.	Front St.	Barber Asph. Pav. Co.	Californian	10.40	57	300	250	194
Jarvis St.	King St.	Wellington St.	Const'g & Pav. Co.	Trinidad Pitch Lake	9.28	43	340	273	200
Jones Ave.	Queen St.	Gerrard St.	"	Bernudez	10.10	40	390	250	203
Jones Ave.	Queen St.	Gerrard St.	"	Californian	9.28	43	335	252	194
Langley Ave.	Havelock St.	Ontario St.	Golson Con. Co.	Californian	11.80	60	330	240	197
Langley Ave.	Gerrard St.	Bath Ave.	Watson Btr. Pav. Co.	"	11.80	60	330	240	160

[illegible]

where the City Engineer's tender was lowest, and which were accepted by the contractor at his figures, said saving being the difference between the City Engineer's tender and the contractor's original tender.

The total saving, therefore, that can be credited to the day labor system is \$32,800.87.

In addition to this saving, the Department is also entitled to the saving on the cost of inspection, which is always incurred on contract work, but is rendered unnecessary on day labor works. Estimated at \$3.50 per day for the actual time the work was in progress, this saving would amount to \$2,346.

On referring to the various tables in connection with day labor works and comparing them with those of other years, it will be found that this branch of the Engineer's Department is steadily increasing its business, notwithstanding the fact that there are more contractors doing street work in Toronto this year than ever before.

There were 6 foremen employed throughout the year on day labor works, giving work to about 125 men.

MAINTENANCE DEPARTMENT.

Following is a statement in brief of the work carried out by the maintenance branch of the Roadways Department, for the past year:

MACADAM ROADWAYS.

The undermentioned macadam roadways which were constructed as local improvements have been resurfaced at the costs given below. These roadways are now in a creditable condition. However, there are a number of old macadam roads throughout the City, which are in such condition that would not warrant resurfacing; these roads have been repaired from time to time as the occasion demanded.

The cost of the work done on pavements that have been resurfaced is as follows:

Cherry Street, Eastern Avenue to G. T. R. tracks.....	\$420 19
Cypress Street, Eastern to Front	118 61
Front Street, Trinity to Cherry	240 11
Sumach Street, Gerrard to Carlton	599 48
Glen Road, Dale to Elm	691 50
Crescent Road, Park Road to South Drive.....	684 25

South Drive, Scarth to Glen	592 38
River Street, Gerrard to Queen	1,070 42
Eastern Avenue, Trinity to Don	492 09
Wellesley Crescent, Jarvis to Sherbourne	717 82
Spruce Street, Sumach to River	302 16
Suffolk Place, Homewood to west end	123 52
Maitland Place, Homewood to west end	152 52
Queen's Park Avenue, Queen to Caer Howell	2,119 49
Ossington Avenue, Bloor to C. P. R.	1,522 89
Don Esplanade, King to Eastern	1,298 28
Grenville Street, Yonge to Queen's Park	705 96
Isabella Street, Jarvis to Sherbourne	364 70
	<hr/>
	\$12,216 37

Queen's Park Avenue, Queen to Caer Howell, was treated with Tarvia, at a cost of about ten cents per square yard, over and above the ordinary cost of a 4-inch granite resurfacing. The resulting pavement is apparently quite satisfactory for light traffic, as it is smooth and comparatively free from dust.

The undermentioned is a list of those macadam roads which were repaired and patched to keep in a safe state for traffic, but did not warrant resurfacing:

Agnes Street, Armory Street, Balmuto Street, Bay Street, Bellair Street, Bond Street, Breadalbane Street, Centre Avenue, Chapel Street, Charles Street West, Charles Street East, Chestnut Park Road, Christopher Street, Cluny Avenue, Cottingham Street, Crescent Road, Cumberland Street, Dalhousie Street, Davenport Road, Edward Street, Elizabeth Street, Elm Street, Front Street, Gerrard Street East, Gloucester Street, Grosvenor Street, Irwin Avenue, Isabella Street, Lake Street, Macpherson Avenue, Maitland Street, Mutual Street, North Street, Queen's Park, e.s., Richmond Street, St. Alban's Street, St. Joseph Street, St. Mary Street, St. Nicholas Street, St. Thomas Street, St. Vincent Street, Sheppard Street, Shuter Street, Surrey Place, Temperance Street, Terauley Street, Trinity Square, University Street, Walton Street, Wellesley Street, Yonge Street, York Street, York Street Bridge, Davenport Road, Crescent Road, Temperance Street, Davenport Road, Huron Street, Washington Avenue, Beverley Street, Grange Road, Larch Street, Denison Avenue, Wellington Street West, Poplar Plains Road, Foxley Street, Wellington Avenue, Montrose Avenue, Stafford Street, S. McDonnell Square, Claremont Street, Kingston Road, DeGrassi Street, Logan Avenue, First Avenue, Lang-

ley Avenue, Riverdale Avenue, Eastern Avenue, Brock Avenue, Lansdowne Avenue, Tyndall Avenue, Elgin Avenue, Harbord Street, Division Street, Caer Howell Street, Grange Avenue, John Street, Spadina Avenue, Front Street, Dovercourt Road, Strachan Avenue, Cinder Avenue, Givens Street, Atlantic Avenue, Robinson Street, Palmerston Avenue, Queen Street East, Munro Street, McGee Street, Elliott Street, Victor Avenue, Don Improvement Roadway, Atlantic Avenue, Dufferin Street, Lakeshore Road, Scarth Road, Nanton Avenue, Hurst Place, Wellesley Street, Oak Street, Wilton Avenue, Front Street, Cherry Street, Jarvis Street, George Street.

GENERAL ROAD REPAIRS.

The different classes of pavements throughout the City, such as stone, brick, cedar block, asphalt, gravel, macadam and unpaved streets, etc., etc., have all received attention from time to time, to keep them in a fit state for traffic.

GRADING.

The following streets were graded and turnpiked at the costs stated:

Albemarle Avenue, Logan to west end	\$747 14
Major Street, Bloor to Lowther	54 25
Castle Avenue, Walmer to Kendal	81 60
Dufferin Street, G. T. R. to Dominion Street	30 59
Indian Road, Lake Shore Road to High Park Boulevard	81 72
Geoffrey Street, Roncesvalles to Sunnyside	81 75
Eastern Avenue, G. T. R. to Queen	312 26
Harcourt Avenue, Pape to Carlaw	23 61
Hastings, Queen to North	73 36
Rowanwood Avenue, a point east of Yonge to Scarth	120 55
Marmaduke Street, Roncesvalles to Sunnyside	51 08
Highland Avenue, Schofield to West	44 50
Scarth Road, Chestnut Park to North	328 86
Hogarth Avenue, (Blvd.) Broadview easterly	31 75
Russill Hill Drive, Poplar Plains to St. Clair	116 50
Emerson Avenue, 495 feet north, Wallace to Lappin	129 40
Hickson Avenue, St. Clarens to Norfolk Place	19 64
Kippendavie Avenue, Queen to south end	30 15
Kenilworth Avenue, Queen to south end	164 33
Queen Street, opposite Woodbine Race Course	52 30
Brown Street, Paton Road to south end	30 50
Janet Street, Brown to Lansdowne	16 75
Millicent Street, Emerson to Dufferin	31 25

Dominion Street, Dufferin to west end	77 50
Carlaw Avenue, Eastern Avenue south	18 55
High Park Boulevard, Roncesvalles to Park	49 11
Heath Street, Avenue Road to a point east of Oriole	26 95
Forrest Hill Road, St. Clair to Lonsdale	28 44
North Markham Street, Olive to Vermont	36 00
Oriole Road, St. Clair to Lonsdale	116 12
St. Clair Avenue, Avenue Road to Warren Road	113 22
Schofield Avenue, Binscarth to Edgar	18 00
Lonsdale Avenue, east and west from Avenue Road	93 00
Clarendon Avenue, Poplar Plains to Russill Hill	49 39
Bilmoral Avenue, Poplar Plains to Russill Hill	46 50
Galley Avenue, Roncesvalles to Sunnyside	33 87
Glen Road, Bridge to Pellam	204 89

NEW STREETS—OPENED AND EXTENDED.

The following streets have been opened or extended during 1908:

Whytock St., from Lansdowne Ave to St. Helen's Ave.
 Woodlawn Ave., from Woodland Ave. to Farnham Ave.
 Shaw Place, from Ossington easterly (widening).
 Armstrong Ave., from west end to Emerson Ave.
 Radford Ave., from west end to Indian Rd.

SIDEWALK EXTENSIONS.

At the request of property owners and others, sidewalk extensions and private crossings have been constructed by the Department, for which there has been received and paid to the City Treasurer the sum of \$640.26.

The amount received on miscellaneous accounts and paid to the City Treasurer was \$536.91.

STREET OPENING PERMITS.

The number of permits issued to builders, excavators and others who were desirous of temporarily removing portions of sidewalks, was six. In each case a deposit was exacted as a guarantee that the sidewalk would be properly restored. The total amount of these deposits received and paid to the City Treasurer was \$42.

STREET NUMBERING.

During the past year a very large number of new houses have been erected, necessitating the placing of a correspondingly large number of

house numbers. The number of figures used for this purpose, together with the re-numbering of certain streets, was 8,056. There have also been erected at street intersections throughout the City 1,186 enamelled street signs.

The amount that Council saw fit to appropriate for this service, viz., \$2,000, was not sufficient to carry out all the renumbering necessary.

The following streets have been renumbered during the past year:

Hamburg Avenue (now Gladstone Avenue), Ivy Avenue, Spadina Crescent, Hastings Avenue, Macpherson Avenue, Belmont Street, Boulthce Avenue, Catherine Street (now Richmond Street), Turner Avenue (now Stanley), Plymouth Place, Blackburn Street, and twenty-one other streets have been renumbered in part.

TRACK ALLOWANCE REPAIRS.

This branch of maintenance work is being pushed along as rapidly as possible, as the track allowances throughout the City have been in a bad state of repair. Table No. 13 will give details of work done during 1908.

A vast improvement is now visible on a great many streets, but it will still take a lot of work to get all these pavements in a good state of repair. The work is costly and slow owing to the fact that there can be no interruption to street car traffic while it is in progress.

TABLE No. 13.
REPAIRS TO TRACK ALLOWANCES, 1908.

Street.	Class.	Amount.
		\$ c.
Arthur Street.....	Repair.....	796 46
Avenue Road.....	".....	327 06
Bathurst Street.....	".....	58 61
Bloor Street W.....	".....	1,055 59
Bloor Street E.....	".....	13,085 25
Bloor, Dufferin, Lansdowne...	New track allow. reconstruction..	188 52
Broadview Avenue.....	Repair.....	434 03
Carlton Street.....	".....	785 85
Church Street.....	".....	37 04
Church St. and inters'n of Queen	".....	324 93
College Street.....	Reconstruction.....	10,953 51

Street.	Class.	Amount.
		\$ c.
College St. and inters'n of Yonge	Reconstruction	3,522 93
Dovercourt Road	Repair	16 16
Dupont Street	Reconstruction	4,935 45
Dufferin Street	Repair	536 23
Dundas Street	"	7,449 33
Exhibition Loop	New track reconstruction	969 67
Front Street W.	Repair	6,363 89
Front Street E.	Reconstruction	2,904 68
Gerrard Street	Repair	634 46
Howard Park Avenue	"	1,186 22
King Street E.	"	1,911 33
King Street W.	Reconstruction	17,932 02
Lansdowne Avenue	Repair	916 91
McCaull Street	"	1 97
Ossington Avenue	"	115 12
Parliament Street	"	334 56
Queen Street W.	Reconstruction	13,548 08
Queen Street E.	"	38,065 30
Richmond Street intersections of Victoria and Church	New track	4,171 04
Rosedale Loop	"	3,504 01
Roncesvalles Avenue	Repair	284 27
Scollard Street	"	468 20
Sunnyside Loop	New track reconstruction	7,047 66
Sherbourne Street	Repair	3,135 63
Spadina Avenue	Reconstruction	5,766 55
Station Street	Repair	162 74
Winchester Street	"	1 44
York Street	"	1,025 73
Yorkville Avenue	"	15 57
Yonge Street	"	7,213 81
		162,197 81
New pavement (completion) G.B. & T.A., Gerrard, Leslie and Greenwood .....	.....	4,889 06
		167,086 87

WOODEN CROSSINGS.

The wood crossings throughout the City have received careful attention to maintain them in a safe state for traffic.

During the past year ten (10) new wood crossings were constructed by this Department as against 57 for the year 1907, and 118 for the year 1906.

PERMANENT CROSSINGS.

Sixty-eight permanent crossings were constructed during the past year, as against 103 laid during the preceding year. These crossings

were built of scoria, stone, and brick, and constitute a clean and durable class of crossing.

LAKE SHORE ROAD RETAINING WALL.

In the early part of the past year Lake Ontario was swept by a series of extremely violent storms, which, in conjunction with the high water, battered down the dry rubble wall along the Lake Shore Road, and washed out large portions of the roadway and sidewalk. This seriously impeded traffic, and operations were commenced to restore the damaged portions of the wall and road.

The wall was rebuilt more strongly than before for a length of 2,864 feet east of the Humber River, besides which 212 lineal feet of cribbing was placed at the east end of the road. These works were backfilled with heavy material, 5,763 cubic yards of brick bats, stone, etc., being used. The total cost of this portion of repairs was \$6,120.66. Having completed the wall, it was then necessary to renew the road and sidewalk, and accordingly 15,742 square yards of macadam was placed, at a cost of \$9,489.68.

The walk from Sunnyside to Windermere Avenue was reconstructed, new plank being laid as far west as the west entrance to High Park, and old plank from the west entrance to Windermere. The hand railing was also renewed where necessary.

The total cost of this walk was \$1,810.09.

ISLAND WALKS.

In the early part of the past year the series of heavy storms experienced and the unusually high water following, washed out large portions of the Lake Shore plank walk, and inundated several streets and considerable private property.

From Clandeboye Avenue to Chippewa Avenue on the Lake Shore, the walk was so damaged that a new walk was found necessary. This walk was built on piers consisting of large heavy boxes filled with gravel and sand.

It was also necessary to replace the walk on Clandeboye Avenue for a length of 600 feet. The total cost of these works was \$1,933.62.

In addition to this, 1,045 feet of 6-ft. plank walk was constructed on the new roadway opened easterly from Chippewa Avenue at a cost of \$1,559.57.

HOUSE OF INDUSTRY STONE.

During the season 1907-8, the casual inmates of the House of Industry broke 1,565 cubic yards of stone, as against 1,586 cubic yards for a like period during the preceding year.

SNOW CLEANING REPORT.

1907-1908.

Ward No.	Division.	Amount Cleaned.		Cost.
		Miles.	Feet.	
1.....	1	19	756	\$ 444 77
	2	45	2,961	1,058 55
	1a	1	4,127	41 38
	1b	1	2,721	35 22
2.....	2	24	1,200	562 87
	1a	5	3,011	129 50
	1b	1	4,163	41 51
	2	3	710	72 81
3.....	3	11	894	259 58
	1	5	2,554	127 35
	2	8	2,378	195 81
	3	32	2,123	752 77
4.....	1	7	2,954	175 61
	2	48	3,384	1,129 93
	3	33	947	770 76
5.....	1	63	2,009	1,472 46
	2	49	4,944	1,160 13
	3	45	4,063	1,063 31
		408	3,659	9,494 32

SNOW CLEANING—SIDEWALKS.

During the winter 1907-8 the snow was removed from 2,157,899 lineal feet of sidewalks, as against 1,752,960 lineal feet during the winter of 1906-7, and 473,102 lineal feet during the winter of 1905-6.

The cost of this work, \$9,494.32, was assessed against the properties fronting on the walks cleaned, the rate being 4 4-10 mills per foot for each removal. This rate is higher by 1 4-10 mills than the rate for the winter of 1906-7.

STAFF.

During the year thirteen foremen were constantly at work on various kinds of repairs, giving employment to about 200 men.

In addition to this staff there were six district foremen looking after maintenance work and minor repairs necessary to keep the roadways and sidewalks in a safe and satisfactory condition.

Respectfully submitted,

M. A. STEWART,

Assistant Engineer.

TABLE No. 7.
ASPHALT PAVEMENTS—1908-09.

Street.	From.	To.	Width Lin. ft.	Length Lin. ft.
*Aberdeen { surface put on '08 }	Parliament.....	441 ft. west	18	441
Admiral	21 ft. s. of n.s. Bernard	18 ft. w. of e.s. St. George	24	965
Armstrong	Dufferin	West end	24	1,271
Ann	Mutual	Yonge	21	1,292
Barton	Bathurst	Markham	24	266
Barton	Palmerston	Manning	24	530
Brock	Bloor	North end	24	990
Berkeley	Queen	Duke	24	827
Brunswick	College	120 ft. north	16 $\frac{7}{12}$ - 16 $\frac{3}{4}$	110
Barton	Christie	Manning	24	559
Barton	Palmerston	Markham	24	266
Bolton	Queen	Gerrard	24	2,435
Broadview	Queen	Eastern	24	945
Bloor	Dufferin	Lansdowne	26	1,956
Clinton	Barton, s.s.	Yarmouth	20	1,298
Clinton	Bloor	Barton	20-24	1,075
Conduit	Dundas	West City Limits ..	24	750
College	Sorauren	Roncesvalles	24	1,358
Crawford	Bloor	Thorne	24	1,023
Carling	Bloor	North end	20	311
Dewson	Ossington	Havelock	24	1,674
Duke	Sherbourne	Parliament	28	1,362
Delaware	Dewson	Bloor	24	1,763
Duchess	Jarvis	Sherbourne	30	885
Duchess	Sherbourne	Parliament	24	1,292
Dingwall	Fape	Carlaw	24	582
Dundas	Ossington	Lansdowne	28	4,956
Essex	Christie	Shaw	24	1,311
Eastern	Morse	Carlaw	24	275
Empress Cres.	Jameson	Dunn	24	769
Emerson	Bloor	Wallace	24	1,454
Endean	Jones	Leslie	24	641
Emily	King	Wellington	21	436
Evans	Clinton	West end	18	272
Euclid	Arthur	College	24	1,500
Euclid	Robinson	Arthur	24	1,254
Franklin	Ruskin	North end	24	1,690
Frankish	Brock	Sheridan	21	434

TABLE No. 7.
ASPHALT PAVEMENTS—1908-09.

Pavement Sq. yds.	Curb.			Completed.	Contractor.
	Width Lin. in.	Length Lin. ft.	Class.		
882	.....	.....	.....	April 23, 1908	Constructing & Pav. Co.
2,719	6	1,831	Concrete	May 28, 1908	" "
3,386	6	2,540	"	July 2, 1908	" "
3,452	.....	.....	.....	Aug. 27, 1908	Godson Contracting Co.
709	.....	.....	.....	Sept. 23, 1908	Day labor.
1,413	6	1,060	Concrete	Oct. 1, 1908	"
2,640	6	1,980	"	June 24, 1908	Godson Contracting Co.
2,341	.....	.....	.....	June 1, 1908	" "
205	.....	.....	.....	Sept. 5, 1908	Day labor.
1,497	6	1,118	Concrete	June 17, 1908	Constructing & Pav. Co.
712	6	532	"	Sept. 10, 1908	" "
6,763	6	16	"	July 30, 1908	Warren Bit. Paving Co.
2,531	6	1,890	"	July 24, 1908	Constructing & Pav. Co.
6,120	6	3,712	"	Sept. 22, 1908	" "
3,145	6	2,655	Concrete	June 18, 1908	Constructing & Pav. Co.
2,713	.....	.....	"	July 29, 1908	Godson Contracting Co.
2,170	6	112	"	Aug. 29, 1908	" "
4,471	.....	.....	.....	Aug. 18, 1908	" "
2,727	6	2,046	Concrete	July 14, 1908	" "
728	6	315	"	July 11, 1908	" "
4,739	.....	.....	.....	June 23, 1908	Godson Contracting Co.
4,546	6	38	Concrete	July 16, 1908	Constructing & Pav. Co.
4,706	.....	.....	.....	Sept. 9, 1908	" "
2,957	.....	.....	.....	June 1, 1908	Godson Contracting Co.
3,590	.....	.....	.....	June 1, 1908	" "
1,553	6	1,164	Concrete	June 2, 1908	Barber Asphalt Pav. Co.
16,141	6	9,668	"	Nov. 27, 1908	Constructing & Pav. Co.
3,499	.....	.....	.....	Oct. 10, 1908	Godson Contracting Co.
741	6	615	Concrete	Oct. 15, 1908	Day labor.
2,111	.....	.....	.....	Oct. 12, 1908	Barber Asphalt Pav. Co.
3,947	6	76	Concrete	July 4, 1908	Constructing & Pav. Co.
1,709	.....	.....	.....	May 30, 1908	Barber Asphalt Pav. Co.
1,025	6	871	Concrete	June 3, 1908	Godson Contracting Co.
585	.....	.....	.....	Oct. 30, 1908	Barber Asphalt Pav. Co.
4,005	6	3,004	Concrete	Nov. 14, 1908	Day labor.
3,378	.....	.....	.....	Nov. 20, 1908	Godson Contracting Co.
4,680	.....	.....	.....	Aug. 1, 1908	Day labor.
1,028	.....	.....	.....	July 28, 1908	Constructing & Pav. Co.

ASPHALT PAVEMENTS - *Continued.*

Street.	From.	To.	Width Lin. ft.	Length Lin. ft.
Gladstone	College	Lindsay	24	332
Galley	Roncesvalles	Sorauren	24	1,357
Geoffrey	Roncesvalles	Sorauren	24	1,355
Gore	Clinton	West end	21	297
Gerrard	Logan, w.s.	700 ft. east	26	700
Grace	1,744 ft. north of College.	160 ft. further north	21	160
Gerrard	Parliament	River, e.s.	28	2,162
Golden	Dundas	North end	24	664
Gould	Victoria	Mutual	28	916
Grace	1,494 feet north of College.	250 ft. further north	21	250
Gladstone	Bloor	990 ft. south	24	990
Hamburg	Bloor	Van Horne	24	3,129
Hamilton	Kintyre	Gerrard	21	1,819
Hamilton	Queen	Kintyre	18	558
Havelock	College	Bloor	24	2,794
Huxley	Jameson	Tyndall	24	1,824
Hallam	Shaw	Dovercourt	24	1,584
Harbord	Palmerston	Clinton	24	795
Harbord	Spadina	Huron	24	467
Howard Park Avenue	Dundas	Indian Rd.	26	1,711
James	Queen	Albert	10 $\frac{1}{4}$	380
*Jarvis	Queen	Front	40-44	276
Jordan (resurface)	King	Wellington	23 $\frac{3}{8}$ -25 $\frac{3}{4}$	379
Jones	Queen	Gerrard	24	2,430
Lindsay	Havelock	Dufferin	24	881
Logan	Gerrard	Bain, n.s.	24	1,773
Lindsay	Brock	Dufferin	24	979
Lennox	Bathurst	Borden	24	570
Manning	Bloor	North end	24	3,159
Major	Bloor	Lowther	24	783
Mutual	Carlton	Maitland	18 $\frac{1}{2}$	1,013
Moutray	Sheridan	Brock	22	433
Montrose	Bloor	1,000 ft. south	24	1,009
Massey	King	Queen	24	1,173
Muir	Dufferin	Brock	24	981
Northumberland	Ossington	Delaware	21	527
Napier	Munro	West end	20	324
O'Hara	Queen	North end	24	1,665
Ontario	King	Duke	23-8	265
Ontario	Queen	Duke	24	765

ASPHALT PAVEMENTS—*Continued.*

Pavement Sq. yds.	Curb.		Class.	Completed.	Contractor.
	Width Lin. in.	Length Lin. ft.			
885	.....	.....	.....	July 7, 1908	Day labor.
3,621	.....	.....	.....	Oct. 8, 1908	Godson Contracting Co.
3,617	.....	.....	.....	Sept. 29, 1908	" "
664	6	569	Concrete	July 6, 1908	Day labor.
2,792	6	1,457	"	Sept. 14, 1908	Godson Contracting Co.
374	6	320	"	July 4, 1908	Constructing & Pav. Co.
7,028	6	4,046	"	Aug. 19, 1908	Godson Contracting Co.
1,832	6	10	"	Aug. 17, 1908	Constructing & Pav. Co.
3,056	6	73	"	July 11, 1908	Godson Contracting Co.
586	.....	.....	.....	July 4, 1908	Constructing & Pav. Co.
2,640	.....	.....	.....	Oct. 31, 1908	Godson Contracting Co.
8,443	6	6,314	Concrete	Sept. 25, 1908	Godson Contracting Co.
4,331	6	48	"	Sept. 4, 1908	Constructing & Pav. Co.
1,116	.....	.....	.....	Sept. 1, 1908	" "
7,704	5	155	Concrete	June 18, 1908	Godson Contracting Co.
5,166	6	791	"	Aug. 4, 1908	" "
4,596	6	375	"	June 22, 1908	Constructing & Pav. Co.
2,120	.....	.....	.....	July 27, 1908	Godson Contracting Co.
1,256	.....	.....	.....	July 24, 1908	" "
4,998	6	73	Concrete	Oct. 29, 1908	" "
456	.....	.....	.....	May 14, 1908	Day labor.
1,327	9	88	Concrete	May 23, 1908	Barber Asphalt Pav. Co.
1,045	.....	.....	.....	July 11, 1908	Constructing & Pav. Co.
6,798	.....	.....	.....	Sept. 4, 1908	" "
2,545	6	1,659	Concrete	Oct. 6, 1908	" "
5,193	6	119	"	Sept. 10, 1908	Godson Contracting Co.
2,735	6	1,978	"	May 14, 1908	Warren Bit. Paving Co.
1,528	6	1,140	"	Aug. 4, 1908	Constructing & Pav. Co.
8,914	6	347	"	June 12, 1908	Constructing & Pav. Co.
2,162	.....	.....	.....	July 11, 1908	" "
2,172	.....	.....	.....	July 23, 1908	Godson Contracting Co.
1,063	.....	.....	.....	July 28, 1908	Constructing & Pav. Co.
2,678	.....	.....	.....	July 16, 1908	Godson Contracting Co.
3,256	.....	.....	.....	Nov. 13, 1908	Constructing & Pav. Co.
2,738	6	142	Concrete	Nov. 14, 1908	" "
1,230	.....	.....	.....	July 22, 1908	" "
718	6	648	Concrete	July 24, 1908	" "
4,455	6	125	"	Nov. 21, 1908	Godson Contracting Co.
821	.....	.....	.....	July 14, 1908	Constructing & Pav. Co.
2,083	6	45	Concrete	Aug. 29, 1908	Day Labor.

ASPHALT PAVEMENTS— *Continued.*

Street.	From.	To.	Width Lin. ft.	Length Lin. ft.
Parliament	Wellesley, s.s.	45 ft. n. of s. s. of Howard.	24	1,287
Perth	Bloor	South end	24	884
Parkway	Dundas	College	24	883
Portland	King	Queen	24	1,051
Parliament	Winchester	Wellesley	26	810
Perth	Royce	C.P.R.	24	559
Richmond	Victoria	Church	24	570
*Roncesvalles	Queen	Dundas	26 $\frac{1}{2}$	Sections
Russett	Bloor	987 ft. north	22	987
Richmond	Bay	York	26 $\frac{1}{2}$	843
Springhurst	350 ft. w. of Dufferin	Tyndall, w. s.	30	152
Springhurst	Dufferin	350 ft. west	25	352
Simcoe (re-surface) ..	King	Queen	38	1,184
Scollard	Yonge	480 ft. west	23	480
Sultan	St. Thomas	West end	24	178
Scollard	480 ft. w. of Yonge	Hazelton	21	998
Sinclair	Conduit	Chelsea	24	599
St. Clarens	Wallace	Lappin	21	927
Seaton	Queen	Carleton	24	3,173
Shanley	Salem	Dufferin	24-25	827
Shaw	Arthur	College	24	1,501
Symington	Royce	North City limits ..	24	457
Shuter	Yonge	Victoria	35 $\frac{1}{2}$	267
Shuter	Victoria	Jarvis	28-31	1,151
Sherbourne(re-s'rf'ce)	King	Wilton	22-26	2,607
VanHorne	Dovercourt	Ossington	24	915
Wallace	Dufferin	Lansdowne	24	1,955
Wallace	Lansdowne	1st tracks west	24	598
				111,043

ASPHALT PAVEMENTS—*Continued.*

Pavement Sq. yds.	Curbs.			Completed.	Contractor.
	Width. Lin. in.	Length Lin. ft.	Class.		
3,691	6	2,552	Concrete	Sept. 9, 1908	Day Labor.
2,355	6	1,641	"	July 29, 1908	"
2,352	6	46	"	July 27, 1908	Constructing & Pav. Co.
2,802	.....	.....	.....	July 20, 1908	Godson Contracting Co.
2,623	.....	.....	.....	June 30, 1908	Day Labor. Order of Council.
1,625	6	79	Concrete	Oct. 30, 1908	Godson Contracting Co.
1,395	.....	.....	.....	Dec. 7, 1908	Constructing & Pav. Co.
at north and south ends still unfinished.				Carried over to 1909	Warren Bituminous Pav. Co.
2,413	.....	.....	.....	June 26, 1908	Godson Contracting Co.
2,426	.....	.....	.....	May 21, 1908	"
536	6	75	Concrete	Oct. 9, 1908	Barber Asphalt Pav. Co.
929	6	54	"	Oct. 7, 1908	Constructing & Pav. Co.
5,363	.....	.....	.....	May 4, 1908	"
1,212	6	870	Concrete	Oct. 1, 1908	Day Labor.
480	6	374	"	May 8, 1908	"
2,362	6	1,962	"	Sept. 12, 1908	"
1,598	6	1,198	"	June 13, 1908	"
2,162	.....	.....	.....	Sept. 16, 1908	Godson Contracting Co.
8,603	.....	.....	.....	July 9, 1908	"
2,262	.....	.....	.....	Aug. 19, 1908	Day Labor.
4,074	6	63	Concrete	Aug. 24, 1908	Godson Contracting Co.
1,219	6	10	"	Aug. 5, 1908	"
1,062	.....	.....	.....	Aug. 6, 1908	Constructing & Pav. Co.
3,959	6	52	Concrete	Oct. 29, 1908	Barber Asphalt Pav. Co.
7,413	6	280	"	June 12, 1908	"
2,729	6	1,876	"	Sept. 22, 1908	Day Labor.
5,517	.....	.....	.....	Sept. 3, 1908	Godson Contracting Co.
1,660	6	35	Concrete	July 20, 1908	Constructing & Pav. Co.
313,532	.....	66,932	.....	.....	.....

ASPHALT BLOCK.

Street,	From.	To.	Width Lin. Ft.	Length Lin. Ft.
Bathurst	King.	Queen	28	1,175
Colborne.	Church.	West Market	25 ² ₁₃	420
Northumberland	Dovercourt.	Westmoreland	21	268
West Market.	King.	Front	44	358
Wolseley.	Bathurst.	Markham	24	273
Sackville.	King.	Eastern	24	388
				2,882

BITULITHIC.

† Avenue Road	St. Clair, s.s.	Lonsdale, n.s.	24	1,525
Avenue Road.	241 feet north of Cottingham.	350 ft. n. Balmoral	24	1,780
Binscarth	Glen Road	East end	24	1,281
Binscarth	Glen Road	Pelham Place	24	568
Charles	Yonge	Church	24	938
Castle Frank Av., and Crescent.	McKenzie Ave	East limit Lot 16	21	1,445
Edgar	Schofield.	Glen Road	24	1,302
East Roxborough.	Schofield.	Edgar	24	981
Forest Hill Road.	St. Clair	Lonsdale	24	1,489
Glen Road.	Pelham Place.	East Roxborough	24	1,172
Harbord	Markham	Palmerston	24	265
Humboldt	Poplar Plains.	Warren	24	614
Leslie	Queen	Doel	24	1,263
Leslie	Doel, s.s.	Gerrard	24	1,175
Lynd	Dundas	Neepawa.	24	518
Lynwood	Avenue Road.	Poplar Plains.	24	606
Manchester.	Shaw	Ossington	21	600
Murray	Caer Howell	Orde	21	827
Marjory	Gerrard	424 ft. south	24	424
Maple	Glen, w.s. running s.	Dale.	24	1,129
Poplar Plains.	Macpherson, s.s.	Edmund	20	1,933
Roxborough, East.	Yonge	2,180 ft. east	24	2,184
Roxborough	Yonge	632 ft. e. Avenue Rd.	33	1,330
Trafalgar	Gladstone	Dufferin	24	346
Wickson	Yonge	West end	21	1,581
Wilton Crescent.	George	Sherbourne	30	734
				28,120

ASPHALT BLOCK.

Pavement Sq. yds.	Curbs.			Completed.	Contractor.
	Width Lin. inch.	Length Lin. ft.	Class.		
4,115	July 4, 1908	C. W. Dill & Co.
1,198	Oct. 2, 1908	Day Labor.
638	Nov. 11, 1908	Excelsior Con. & Pav. Co.
1,751	Sep. 15, 1908	Day Labor.
732	Oct. 16, 1908	Construction & Pav. Co.
1,035	Sep. 22, 1908	Day Labor.
9,469					

BITULITHIC.

4,791	6	3,296	Concrete	Carried over to 1909.	Warren Bit. Paving Co.
4,936	6	3,532	"	July 15, 1908	" " "
3,595	6	70	"	Aug. 10, 1908	" " "
1,511	6	987	"	Oct. 21, 1908	Constructing & Pav. Co.
2,503	.....	.....	.....	Dec. 4, 1908	Concrete base.
4,419	6	3,034	Concrete	Warren Bit. Paving Co.	Bitulithic surface.
4,299	6	2,537	"	Sep. 24, 1908	" "
2,656	6	1,962	"	Aug. 6, 1908	" "
4,105	6	162	"	Oct. 5, 1908	" "
4,194	6	7	"	Oct. 8, 1908	" "
708	.....	.....	.....	Oct. 13, 1908	" "
1,642	6	1,228	Concrete	Nov. 6, 1908	" "
3,368	.....	.....	.....	Aug. 17, 1908	" "
3,508	6	13	Concrete	June 1, 1908	" "
1,777	6	46	"	Aug. 26, 1908	" "
1,614	6	1,217	"	Aug. 27, 1908	" "
1,402	6	1,201	"	Oct. 22, 1908	" "
1,984	6	54	"	Sep. 25, 1908	" "
1,131	.....	.....	.....	Aug. 20, 1908	" "
3,201	6	35	Concrete	May 19, 1908	" "
4,441	6	3,789	"	Sep. 1, 1908	" "
6,575	6	163	"	Nov. 13, 1908	" "
4,937	.....	.....	.....	July 20, 1908	" "
923	.....	.....	.....	July 21, 1908	" "
3,745	.....	.....	.....	Sep. 21, 1908	" "
2,574	.....	.....	.....	Aug. 18, 1908	" "
	.....	.....	.....	Aug. 15, 1908	" "
	.....	.....	.....	Sep. 3, 1908	" "
80,539		23,333			

BRICK.

Street.	From.	To.	Width Lin. Ft.	Length Lin. Ft.
Balsam	Spadina	Charlotte	18.9	292
Buller	Kippendavie	West end	24	231
Clarke	Bolton	Grant	18	436
Fraser	133 feet south of Liberty.	Railway tracks	24	722
Grandview	Logan	643 feet west.	21	644
Lane 1st n. of Front.	Spadina	East end	14-19.2	383
Lane bet'w'n Edward and Elm.	Chestnut	Centre	13	275
Mountstephen	Broadview	Munro	24	426
River	King	Queen	24	129
St. Helens	Dundas	Bloor	24	2,902
Wascana	Simach	East end	18	311
				6,751

VITRIFIED BLOCK.

Dundas	Lansdowne, e.s.	Bridge	23	604
*Don Esplanade w.	Queen	Mark	28	Totals e
Frederick	King	Front	28	273
Front	George, w.s.	Sherbourne, e.s.	28	720
Harbor	Yonge	Bay	42	503
Lane 1st east of York	Piper	Wellington	10 $\frac{3}{8}$ -13 $\frac{3}{4}$	198
Lane 1st east of Yonge	Wilton	Gould	15	573
Lane 1st n. of Front	Church	West Market	14	421
Lane 1st s. of King	Church	West Market	15.2-20	441
Lane 1st s. of Queen	Church	East end	12	440
Parliament	King	Mill, s.s.	32	852
Queen east	River, w.s.	Don Bridge	28	380
Sherbourne	Front	King	28	273
				5,678

BRICK.

Pavement Sq. Yds.	Curbs.			Completed.	Contractor.
	Width Lin. In.	Length Lin. ft.	Class.		
617	.....	.....	.....	May 16, 1908	Day labor.
613	6	5	Concrete	Aug. 18, 1908	J. K. McKnight.
908	6	864	"	June 15, 1908	"
1,923	6	1,421	"	Sep. 30, 1908	Godson Contracting Co.
1,503	6	1,288	"	June 13, 1908	J. Connolly.
608	6	443	"	May 26, 1908	Day labor.
387	6	552	"	June 1, 1908	"
1,210	6	793	"	Sep. 2, 1908	J. Maguire.
341	.....	.....	.....	Sep. 18, 1908	Day labor.
7,904	6	74	Concrete	Nov. 23, 1908	Reeve Concrete Pav. Co.
628	.....	.....	.....	July 4, 1908	Day labor.
16,642		5,440			

VITRIFIED BLOCK.

862	6	592	Concrete	Carried over to 1909.	Constructing & Pav. Co.
embodied in	Report for	1907	.....	May 16, 1908	Day labor.
833	6	573	Concrete	Nov. 25, 1908	"
2,143	6	915	"	July 31, 1908	Godson Contracting Co.
2,266	6	593	"	Oct. 17, 1908	Day labor.
275	6	284	"	Aug. 25, 1908	Reeve Concrete Pav. Co.
1,050	6	831	"	June 30, 1908	"
742	.....	.....	.....	Oct. 23, 1908	Day labor.
849	6	47	Concrete	Nov. 12, 1908	"
705	6	216	"	June 3, 1908	"
2,415	6	1,454	"	June 26, 1908	"
1,261	6	744	"	Carried over to 1909.	J. Maguire.
805	6	502	"	Nov. 25, 1908	Day labor.
14,206		6,751			

MACADAM.

Street.	From.	To.	Width Lin. ft.	Length Lin. ft.
Cluny	Crescent Rd	Roxborough	21	282
Huntley	Elm	The Bridge	24	350
Parkview	175 feet north of Wellesley.	63 feet further north	24	68
Pinehill Rd. (Recon.)	Rosedale Road	West end	18	298
Winchester (Recon.)	Sumach	Danforth	24 30	4,140
				5,138

CEDAR BLOCK ON CONCRETE.

Esplanade	Scott, w.s.	Yonge	40-50.2	314
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CONCRETE PAVEMENTS.

Bright	King	Queen	20	513
La. 1st e. of Victoria	100 ft. n. of Shuter	Wilton	13 $\frac{1}{2}$	470
Lane 1st s. of Queen	Esther	McDougal's Lane . .	10	389
Lane 1st e. of Jarvis	Shuter	182 ft. north	11	182
Lane 1st n. of Front	York	269 ft. west	14 $\frac{1}{4}$ -17 $\frac{1}{2}$	265
Lane 1st n. of King	Bay	183 ft. e. and thence s. 91 ft 8 in.	8-15	272
Lane 1st s. of Queen	Peter	248 ft. west	14	270
Lane bet. Borden and Lippincott.	College	VanKoughnet	17	562
				2,923

GRANITE BLOCK TRACK ALLOWANCE.

Gerrard	165 ft. e. of Leslie.	509 ft. further east.	15.2	509
Richmond	Church	Victoria	18	571
				1,080

MACADAM.

Pavement Sq. yds.	Curbs,			Completed.	Contractor.
	Width Lin. in.	Length Lin. ft.	Class.		
659	.....	.....	.....	May 6, 1908	Day labor, Order of Council.
919	.....	.....	.....	May 9, 1908	Day labor.
179	4	68	Wood	May 12, 1908	"
655	6	627	Concrete	Nov. 13, 1908	Day labor.
9,905	.....	.....	.....	July 7, 1908	Day labor, Order of Council.
12,317		695			

CEDAR BLOCK ON CONCRETE.

1,696	6	621	Concrete	July 13, 1908	Day labor, order of Council
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CONCRETE PAVEMENTS.

1,143	6	1,039	Concrete	Aug. 18, 1908	Cres. Concrete Pav. Co.
707	6	942	"	July 31, 1908	Constructing & Pav. Co.
529	.....	.....	.....	June 4, 1908	Day labor.
225	6	124	Concrete	Sep. 2, 1908	Grant Contracting Co.
477	6	78	"	Oct. 5, 1908	"
365	.....	.....	.....	May 13, 1908	Crescent Con. Pav. Co.
421	6	45	Concrete	Oct. 13, 1908	Day labor.
1,095	.....	.....	.....	Nov. 16, 1908	Crescent Con. Pav. Co.
4,962		2,228			

GRANITE BLOCK TRACK ALLOWANCE.

860	.....	.....	Sep. 21, 1908	Day labor.
1,142	.....	.....	Dec. 5, 1908	Constructing & Pav. Co.
2,002				

TRACK ALLOWANCE RECONSTRUCTION.

Street.	From.	To.	Width Lin. ft.	Length Lin. ft.
Bloor	Dufferin	Lansdowne	18	1,956
College	Spadina	McCaul	16.5	1,697
College	Havelock	Dovercourt	16.5	776
Dupont	Avenue Rd.	Walmer Rd	16.5	2,898
Dundas	Ossington	Lansdowne	16.5	4,968
Dundas	Arthur	Argyle	16.5	865
Front	Yonge	Church	16.5	950
Front	George	Sherbourne	16.5	609
Front	York	Simcoe	11.5	630
King	Spadina	Bathurst	18	2,020
Queen	Woodbine	Leuty Park	15.2	2,589
Queen	Church	River	16.5	5,247
Queen	Broadview	G.T.R.	16.5	1,110
Queen	Bathurst	Dundas	16.5	4,035
Queen	Pape	Kingston Rd	16.5	5,176
Queen west.....	Roncesvalles.....	Around Sunnyside {	18	490
		Loop.	9	247
Rosedale Loop....	Sherbourne.....	S.s Elm Ave.....	8.25	2,742
Sherbourne.....	Bridge.....	Elm Ave.....	16.5	476
Spadina.....	S.s. Spadina Cres..	Bloor.....	16.5	2,345
Springhurst.....	Dufferin	West and south....	8.25	1,319
			8.25	573
				43,718

INTERSECTIONS.

College, Yonge and Carlton.....			
King and Bathurst ..			
Leuty Park.....			
Queen and Shaw.....			
Queen and Dundas ..			
Richmond & Victoria			
Richmond & Church ..			
York and King			
York and Front.....			

TRACK ALLOWANCE RECONSTRUCTION.

Pavement Sq. yds.	Curb			Completed.	Contractor.
	Width Lin. in.	Length Lin. ft.	Class.		
3,912	Aug. 29, 1908	Day labor.
3,111	Aug. 5, 1908	"
1,423	Dec. 23, 1908	"
5,313	June 15, 1908	"
9,108	Sep. 28, 1908	"
1,586	June 1, 1908	"
1,742	July 9, 1908	"
1,116	Aug. 30, 1908	"
805	Nov. 2, 1908	"
4,040	Sep. 2, 1908	"
4,372	June 4, 1908	"
9,619	Dec. 11, 1908	"
2,035	Dec. 4, 1908	"
7,398	Aug. 6, 1908	"
9,489	July 23, 1908	"
980	Dec. 2, 1908	"
247	Dec. 2, 1908	"
2,513	June 5, 1908	"
873	June 5, 1908	"
4,299	May 28, 1908	"
1,209	May 28, 1908	"
525	Aug. 20, 1908	"
75,715					

INTERSECTIONS.

661	.....	.....	.....	Apl. 24, 1908	Day labor.
288	.....	.....	.....	Aug. 29, 1908	"
309	.....	.....	.....	June 4, 1908	"
66	.....	.....	.....	July 11, 1908	"
150	.....	.....	.....	Aug. 1, 1908	"
162	.....	.....	.....	Dec. 5, 1908	"
404	.....	.....	.....	Nov. 28, 1908	"
369	.....	.....	.....	Aug. 29, 1908	"
540	.....	.....	.....	Aug. 29, 1908	"
2,949					

GRADING.

Street.	From.	To.	Width Lin. ft.	Length Lin. ft.
Boulton	Jones	648 feet east.	38	648
Grace	Bloor	530 feet south.	40	530
Hampton	Sparkhall	Hogarth	38	744
Keele	Howard Park	Bloor	40	2,186
Kew Beach	Woodbine	Kippendavie	38	460
Rusholme	College	St. Anne's	50	682
				5,230

*Carried over from 1907.

†Carried over from 1907 to 1909.

CONCRETE CURBS.

Street.	From.	To.	Side.
Bolton	Queen	Gerrard	West
Binscarth	Glen Road	East End	South
Binscarth	950 ft. E. of Glen Rd.	East End	North
Bathurst	Queen	Farley	East
Bathurst	Adelaide	Farley	East
Bathurst	1st Lane s. of Queen	s. branch of McDonnell Square	West
Berkeley	Queen	Duke	East
Berkeley	Duke	Duchess	West
Balsam	Spadina	Charlotte	North
College	600 ft. w. of Sorauren	Roncesvalles	North
College	Sorauren	Roncesvalles	South
Charles	600½ ft. w. of Yonge	Church	South
Campbell	Antler	Royce	West
Curzon	587 ft. n. of Queen	Sproatt	West
Dawson	Ossington	Delaware	North
Dawson	Ossington	Delaware	South
Dawson	Dovercourt	Havelock	South
Duchess	Berkeley	Parliament	North
Duchess	100 ft. w. of Ontario	Sherbourne	South
Duchess	Ontario	MacFarren's Lane	North
Duchess	Jarvis	Sherbourne	South
Duchess	George	Sherbourne	North
Duke	Sherbourne	Ontario	South
Duke	Berkeley	Parliament	South
Duke	Berkeley	Ontario	North
Delaware	Hepburne	Bloor	West

GRADING.

Cu. yds. Cut.	Cu. yds. Fill.			Completed.	Contractor.
1,133	1,056	.....	.....	June 18, 1908	J. F. Connolly.
4,087	.....	.....	.....	June 16, 1908	Day labor, order of Council
2,126	172	.....	.....	Aug. 26, 1908	Page & Britnell.
26,423	10,057	.....	.....	Sep. 8, 1908	Day labor.
.....	1,325	.....	.....	Oct. 16, 1908	J. H. McKnight.
1,378	578	.....	.....	July 8, 1908	Excelsior Con. & Pav. Co.
35,147	13,188				

CONCRETE CURBS.

Width. lin. inches.	Length. lin. feet.			Completed.	Contractor.
6	2,109.0	Aug.	4, 1908	.....	Warren Bit. Pav. Co.
6	1,276.0	Aug.	10, 1908	.....	" "
6	229.0	Aug.	10, 1908	.....	" "
6	281.5	July	4, 1908	.....	C. W. Dill & Co.
6	486.7	July	4, 1908	.....	" "
6	666.3	July	4, 1908	.....	" "
6	836.0	May	26, 1908	.....	Godson Con. Co.
6	453.7	June	1, 1908	.....	" "
6	291.0	May	16, 1908	.....	Day labor.
6	821.6	Aug.	18, 1908	.....	Godson Con. Co.
6	1,363.0	Aug.	18, 1908	.....	" "
6	337.0	Sept.	24, 1908	.....	Warren Bit. Pav. Co.
5	620.2	Sept.	9, 1908	.....	Crescent Concrete Pav. Co.
5	1,357.0	Nov.	26, 1908	.....	A. Gardner & Co.
6	642.9	June	19, 1908	.....	Godson Con. Co.
6	642.9	June	19, 1908	.....	" "
6	723.3	June	19, 1908	.....	" "
6	296.4	May	16, 1908	.....	" "
6	501.0	May	16, 1908	.....	" "
6	446.0	May	16, 1908	.....	" "
6	877.8	May	16, 1908	.....	" "
6	628.0	May	16, 1908	.....	" "
6	561.7	July	16, 1908	.....	Const'g & Pav. Co.
6	331.3	July	16, 1908	.....	" "
6	398.8	July	16, 1908	.....	" "
6	773.0	Sept.	9, 1908	.....	" "

CONCRETE CURES—*Continued.*

Street.	From	To.	Side.
Defoe	Shaw	Niagara	North
Duchess	Sherbourne	MacFarren's Lane	North
Emerson	Paton Road, s.s.	Wallace	East
Franklin	Ruskin	North End	East
Franklin	Ruskin	Royce	West
Franklin	Edith	North End	West
Frankish	132 ft. w. of Sheridan	Brock	South
Foxbar Road	Avenue Rd.	St. Clair	S. & E.
Geoffrey	Sorauren	Roncesvalles	North
Golden	Dundas	North End	East
Gladstone	740 ft. s. of Bloor	250 ft. further south	East
Glen Road	n.s. Pelham Pl. (prod.)	East Roxborough	East
Glen Road	Binscarth	East Roxborough	West
Havelock	College	Dewson, n.s.	West
Havelock	392 ft. n. of n.s. Dewson	Bloor	West
Harbord	Markham	Manning	South
Hallam	Shaw	Dovercourt	North
Hallam	Shaw	Concord	South
Hamilton	Kintyre	Gerrard	West
Harrison	Ossington	Lakeview	South
Jones	Queen	Gerrard	East
Jones	683.3 ft. n. of Queen	311 ft. further north	West
Logan	Withrow	Bain, n.s.	East
Langley	Broadview	Logan	South
Langley	Broadview	Logan	North
Leslie	Queen	Doel	West
Leslie	Doel	Sproatt	West
Maple	Glen Road	452 ft. east	North
Manning	Bloor	North End	East
Montrose	Bloor	1000 ft. south	West
Mutual	167 ft. n. of Carlton	Alexander	West
Montray	Brock	Sheridan	North
Moutray	132 ft. 6 in. w. of Sheridan.	Brock	South
Manning	Robinson	Arthur	East
Manning	Robinson	Arthur	West
Muir	Brock	Sheridan	North
Maple	Powell	Dale	South
Northumberland	Westmoreland	Dovercourt	South
Ontario	Duke	King	West
Ontario	Duke	Duchess	East
O'Hara	Queen	Marion	West
Parliament	Winchester	Wellesley	East
Perth	251 ft. north of Royce	Tracks	East
Perth	Royce	Hugo	West
Parliament	Prospect	Wellesley	West
Russett	Bloor	987 feet north	East
Roxborough	Yonge	2,180 feet east	North
Roxborough	Yonge	Cluny	South

CONCRETE CURBS—*Continued.*

Width. lin. inches.	Length. lin. feet.	Completed.	Contractor.
5	1,647.3	Aug. 6, 1908.....	Reeve Concrete Pav. Co.
6	135.8	May 16, 1908.....	Godson Con. Co.
6	750.8	June 29, 1908.....	Const'g & Pav. Co.
6	1,687.9	Aug. 1, 1908.....	Day labor.
6	998.8	Aug. 1, 1908.....	"
6	416.9	Aug. 1, 1908.....	"
6	301.7	July 28, 1908.....	Const'g & Pav. Co.
5	1,301.0	Aug. 4, 1908.....	Day labor (Order of Council).
5	1,376.2	July 24, 1908.....	Crescent Concrete Pav. Co.
6	668.5	Aug. 17, 1908.....	Const'g & Pav. Co.
6	250.0	Oct. 31, 1908.....	Godson Con. Co.
6	1,132.4	Oct. 12, 1908.....	Warren Bit. Pav. Co.
6	701.0	Oct. 12, 1908.....	" "
6	920.0	June 19, 1908.....	Godson Contracting Co.
6	1,421.4	June 19, 1908.....	" "
6	542.0	July 27, 1908.....	Godson Contracting Co.
6	263.7	Aug. 17, 1908.....	Warren Bituminous Pav'g Co.
6	1,532.2	June 17, 1908.....	Constructing & Paving Co.
6	905.7	June 17, 1908.....	" "
6	1,811.0	Sept. 4, 1908.....	" "
5	421.4	May 22, 1908.....	W. R. Payne.
6	2,457.0	Sept. 4, 1908.....	Constructing & Paving Co.
6	310.0	Sept. 4, 1908.....	" "
6	318.9	Sept. 10, 1908.....	Godson Contracting Co.
6	1,933.0	April 24, 1908.....	Day labor.
6	1,934.7	April 28, 1908.....	"
6	1,296.6	Aug. 26, 1908.....	Warren Bituminous Pav. Co.
6	667.0	Aug. 26, 1908.....	" "
6	488.5	Nov. 13, 1908.....	" "
6	3,135.0	June 6, 1908.....	Constructing & Paving Co.
6	1,001.0	July 16, 1908.....	Godson Contracting Co.
6	393.2	July 23, 1908.....	" "
6	433.0	July 28, 1908.....	Constructing & Paving Co.
6	300.0	July 28, 1908.....	" "
5	1,299.4	Sept. 18, 1908.....	Day labor.
5	1,349.8	Sept. 28, 1908.....	"
6	432.0	Nov. 14, 1908.....	Constructing & Paving Co.
6	526.0	Nov. 13, 1908.....	Warren Bituminous Co.
6	265.7	Nov. 11, 1908.....	Excelsior Constr'g & Pav. Co.
6	265.2	July 14, 1908.....	Constructing & Paving Co.
6	414.5	Aug. 29, 1908.....	Day labor.
6	774.0	Nov. 21, 1908.....	Godson Contracting Co.
6	767.4	June 30, 1908.....	Day labor.
6	302.5	Oct. 30, 1908.....	Godson Contracting Co.
6	288.4	Oct. 30, 1908.....	" "
6	376.0	June 30, 1908.....	Day labor.
6	988.8	June 22, 1908.....	Godson Contracting Co.
6	1,298.5	July 21, 1908.....	Warren Bit. Paving Co.
6	892.8	July 21, 1908.....	" "

CONCRETE CURBS—*Continued.*

Street.	From.	To.	Side.
Russett	N. limit of No. 72 . . .	North End	West . . .
Seaton	Queen	Wilton	East . . .
Symington	Royce	N. City limit	West . . .
Springhurst	w.s. Tyndall (prod.) . .	Spencer	South . . .
Shanly	Salem	Dufferin	North . . .
Shanly	Salem	Hamburg	South . . .
Sorauren	Queen	Wright	West . . .
Sorauren	Queen	Wright	East . . .
St. Joseph	Yonge	St. Vincent	South . . .
St. Joseph	Yonge	Chapel Lane	North . . .
St. Helens	Dublin	Dundas	West . . .
Tyndall	King	Springhurst	East . . .
Tyndall	King	Springhurst	West . . .
Trafalgar	Gladstone	Dufferin	South . . .
Wallace	Dufferin	Emerson	South . . .
Wallace	Dufferin	Lansdowne	North . . .
Wickson	1,339 ft. w. of Yonge .	Alcorn	N. and W.
Wilton Crescent	193 ft. 5 in. west of Pembroke	George	South . . .
Wilton Crescent	Pembroke	Sherbourne	North . . .

Summary: Length in feet

Length in miles

PRIVATE CONCRETE SIDEWALKS—1908-09.

No.	Street.	From.	To.	Side.	Width Feet.
1	Avenue Rd.	Farnham	169.6 ft. north	East . . .	5
2	Binscarth	Opp. Nos. 70-76 . . .	. . . . .	North . .	5
3	Bloor	Gladstone	23.1 ft. west	North . .	10.9
4	Bloor	Montr-se	40.2 ft. east	South . .	5
5	Broadview	Opp. Nos. 752 and 754 .	. . . . .	West . .	10
6	Berkeley	Gerrard	1st lane north	East . . .	5
7	Bedford Rd	Opp. No. 44 . . . . .	. . . . .	West . .	5
8	Bloor	Marguerretta	19 ft. west	South . .	14 3
9	Broadview	Opp. No. 716 . . . . .	. . . . .	West . .	6
10	Crescent Rd	Opp. No. 184 . . . . .	. . . . .	East . . .	6
11	Crescent Rd	Opp. Nos. 131-133 . .	. . . . .	South . .	4
12	College	Ossington	40.2 ft. west	South . .	11.8
13	College	Opp. No. 890 . . . . .	. . . . .	North . .	6
14	Cottingham	11.4 ft. w. of Yonge .	108.3 ft. further w. .	South . .	6

CONCRETE CURBS—Continued.

Width. lin. inches.	Length. lin. feet.	Completed.		Contractor.
6	224.0	June	26, 1908.	Godson Contracting Co.
5	1,384.0	May	30, 1908.	Excelsior Constr'g & Pav. Co.
6	464.7	Aug.	25, 1908.	Godson Contracting Co.
6	385.5	Aug.	19, 1908.	"
6	833.1	Aug.	19, 1908.	Day labor.
6	555.1	Aug.	19, 1908.	"
6	2,561.0	Nov.	6, 1908.	Grant Contracting Co.
6	2,481.5	Nov.	21, 1908.	"
6	615.3	Aug.	18, 1908.	A. Gardner & Co.
6	698.0	Aug.	18, 1908.	"
6	1,713.0	Oct.	13, 1908.	Grant Contracting Co.
6	1,476.0	July	21, 1908.	Day labor.
6	1,478.7	July	15, 1908.	"
6	345.0	Aug.	18, 1908.	Warren Bit. Paving Co.
6	1,440.5	Aug.	29, 1908.	Godson Contracting Co.
6	1,913.8	Aug.	29, 1908.	"
6	248.0	Aug.	15, 1908.	Warren Bit. Paving Co.
6	244.0	Sept.	3, 1908.	" " "
6	336.0	Sept.	3, 1908.	" " "
.....	81,442.9			
.....	15.424			

PRIVATE CONCRETE SIDEWALKS—1908-09.

Length. Feet.	Curb.		Completed.	Contractor.
	Class.	Length. Feet.		
194.6	.....	.....	.....	Private.
149.3	5-in. Con.	149.3	.....	"
43.1	.....	.....	.....	"
57.7	.....	.....	.....	"
59.4	.....	.....	.....	"
145.0	.....	.....	.....	"
59.7	.....	.....	.....	"
59.1	5-in. Con.	27.5	.....	"
47.3	.....	.....	.....	"
136.0	.....	.....	.....	"
219.4	.....	.....	.....	"
53.0	6-in. Con.	75.2	.....	"
20.0	.....	.....	.....	"
108.3	5-in. Con.	106.7	.....	"

PRIVATE CONCRETE SIDEWALKS—Continued.

No.	Street.	From.	To.	Side.	Width. Feet.
15	College	40.2 ft. w. of Ossington.	110.6 ft. further w.	South ..	11½
16	Dovercourt	Harrison	199 ft. north	East....	5½
17	Dundas	Queen	40 ft. north	West ..	12
18	Dovercourt	Harrison	121.5 ft. south	East....	5½
19	Dovercourt	Shannon	223.7 ft. south	East....	5½
20	Dovercourt	Opp. Nos. 300-322.	.....	West ..	5
21	Davenport	Avenue Rd.	66.4 ft. east	South ..	8.8
22	Dewson	Ossington	46 ft. west	North ..	5
23	Dundas	Parkway	164.5 ft. west	South ..	5
24	Dewson	108.9 ft. e. of Delaware.	7 ft. further east ..	South ..	5
25	Denison	Wolseley	65.2 ft. north	West ..	5
26	Dundas	164.5 ft. w. of Parkway.	64.2 ft. further w.	South ..	16.7
27	Front	Sherbourne	124.7 ft. west of Frederick.	North ..	5.9
28	Front	York	99.8 ft. west	South ..	11.5
29	Gladstone	Dundas	489 ft. north	West ..	5
30	Grange Ave	Esther	87.1 ft. east	South ..	5
31	Hallam	Gladstone	92.3 ft. west	North ..	5
32	Hogarth	Opp. No. 61 .....	.....	South ..	5
33	Havelock	Sylvan	32 3 ft. north	West ..	4½
34	Harrison	Opp. Tor. Street Railway Station.	.....	North ..	5
35	Harrison	151 ft. e. of Dovercourt.	Lakeview	North ..	5
36	Irwin	St. Nicholas	1st lane west	South ..	4
37	Knox	Queen	141.8 ft. south	East....	5
38	King East	Opp Royal Bank, Nos. 8-12	.....	North ..	12.1
39	King	Spadina	45.6 ft. west	North ..	16
40	Lane in rear of H. A. Wilson, 297-299	.....	Yonge	West ..	2.3
41	Lisgar	Opp. Nos. 227-233	.....	East....	4
42	Lansdowne	Opp. Nos. 754 & 756	.....	West ..	10.6
43	Lat. 1st w. Chapel.	St. Mary	477 ft. south	West ..	4.5
44	Mincing Lane	Wellington	192.7 ft. north	West ..	2.9
45	Macpherson	Poplar Plains	68.5 ft. east	South ..	4
46	Maple	Glen Rd	109 ft. east	South ..	5
47	Ossington	College	5.6 ft. south	West ..	13.5
48	Poplar Plains	Macpherson	14 ft. south	East....	4
49	Queen	Wheeler	49.8 ft. west	North ..	8.1-6
50	Queen	Knox	42.1 ft. east	South ..	10.5
51	Queen	Victoria	45.4 ft. west	South ..	12.5
52	Roncesvalles	Pearson	105 ft. north	West ..	5
53	Scollard	Opp. Nos. 118-123	.....	South ..	4.8
54	Scollard	Opp. Nos. 106-110	.....	North ..	5
55	Scollard	Opp. No. 107 .....	.....	South ..	4.8

PRIVATE CONCRETE SIDEWALKS—*Continued.*

Length. Feet.	Curb.		Completed.	Contractor.
	Class.	Length. Feet.		
110.6	6-in. Con.	110.6	.....	Private.
224.8	6-in. "	228.8	.....	"
40.0			.....	"
147.0	6-in. Con.	151.5	.....	"
254.2	6-in. "	274.7	.....	"
238.4	5-in. "	238.4	.....	"
66.4			.....	"
46.0			.....	"
196.5			.....	"
7.0			.....	"
93.7			.....	"
64.2			.....	"
349.8			.....	"
110.8			.....	"
489.0			.....	"
87.1			.....	"
108.3			.....	"
51.5			.....	"
59.8			.....	"
151.0			.....	"
293.1			.....	"
146.4	5-in. Con.	146.4	.....	"
149.4	5-in. "	153.8	.....	"
47.9			.....	"
64.6			.....	"
29.1			.....	"
56.0			.....	"
32.6			.....	"
512.0			.....	"
102.7	5-in. Con.	35.0	.....	"
68.5			.....	"
127.0	5-in. Con.	131.9	.....	"
5.6			.....	"
26.8	5-in. Con.	30.8	.....	"
60.3			.....	"
50.9			.....	"
56.6			.....	"
105.0			.....	"
96.9			.....	"
50.2			.....	"
50.8			.....	"

PRIVATE CONCRETE SIDEWALKS—*Continued.*

No.	Street.	From.	To.	Side.	Width. Feet.
56	Searth	Chestnut Park Rd.	142.2 ft. north.....	West ..	4 $\frac{1}{2}$
57	Spadina	King	128.5 ft. north	West ..	11.5-20.2
58	Sylvan	Havelock	135 ft. west	North ..	4 $\frac{1}{2}$
59	Strange	Queen	91.8 ft. south	East ...	4
60	Sheppard	110 ft. n. Adelaide.	64.6 ft. further n ..	West ...	9.8
61	Thorold	Opp. Nos. 56-64 ...	.....	North ..	5
62	Victoria	Queen	104 ft. south	West ...	11.6
63	Wellesley	Bleecker	63 ft. west	South ...	20.5
64	Waverley	Queen	North City Limits ..	East	5
65	Yorkville	Point w. of Yonge..	241.9 ft. e. Avenue ..	South ..	6
		Road			
66	York	Front	Station	West ..	10.9-11

PRIVATE BRICK SIDEWALK.

1 Roxborough	786 ft. e. of Yonge.	42 ft. further east..	North ..	4
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CONCRETE SIDEWALKS.

Street.	From.	To.	Side.	Width. Feet.
Aberdeen	Ontario.	222 feet east.....	North ..	4
Albert.	Elizabeth	Chestnut	South ..	6
Albert.	James	Chestnut	North ..	6
Albert.	Teraulay	Elizabeth	South ..	6
Argyle.....	Dundas.	Givens	South ..	5
Argyle.....	Dundas.	Givens	North ..	5
Allan	Broadview.....	Bolton	South ..	5
Amelia.	Sumach.	Sackville	North ..	5
Amelia.	Metcalf.	Parliament	South ..	5
Amelia.	Sackville	Metcalf.	South ..	5
Albany.	Wells	Dupont.....	East ...	5
Alma.	Dufferin	Gladstone.	South ..	4 $\frac{1}{2}$
Allan	Broadview	Bolton	North ...	5
Augusta.....	Bellevue Place.....	N. S. Denison Sq.	West.....	5

PRIVATE CONCRETE SIDEWALKS—*Continued.*

Length. Feet.	Curb.		Completed.	Contractor.
	Class.	Length. Feet.		
160.2	.....	.....	.....	Private.
128.5	.....	.....	.....	"
135.0	5-in. Con.	135.0	.....	"
91.8	5-in. Con.	91.8	.....	"
64.6	5-in. Con.	64.6	.....	"
127.4	.....	.....	.....	"
104.0	.....	.....	.....	"
73.0	.....	.....	.....	"
200.0	5-in. Con.	200.0	"
1,001.2	"
145.0	"
8,496.1	2,352.0	

PRIVATE BRICK SIDEWALK.

42	Private.
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CONCRETE SIDEWALKS.

Length in feet.	Curb.		Completed.	Contractor.
	Class.	Length in Feet.		
223.7	.....	.....	Oct. 17, 1908	Queen City Con. Pav. Co.
182.2	.....	.....	Oct. 19, 1908	Day labor.
827.6	.....	.....	May 16, 1908	"
339.5	.....	.....	June 1, 1908	Grant Contracting Co.
290.3	5-in. concrete....	291.5	Sept. 29, 1908	"
299.7	"	299.7	June 17, 1908	Crescent Con. Pav. Co.
830.0	"	19.4	May 12, 1908	A. J. Penberthy.
697.0	6-in. concrete....	38.0	April 25, 1908	Reeve Con. Pav. Co.
324.5	.....	.....	April 27, 1908	"
404.8	.....	.....	April 24, 1908	"
1,100.5	.....	.....	Aug. 17, 1908	"
371.1	5-in. concrete....	352.2	July 3, 1908	Day labor.
827.0	.....	.....	Aug. 5, 1908	W. R. Payne.
168.0	.....	.....	June 20, 1908	Day labor, order of Council

CONCRETE SIDEWALKS—Continued.

Street.	From	To.	Side.	Width Feet.
Baldwin.....	Spadina	Kensington.	South ..	5
** Bathurst.....	Bloor.	Follis.	West....	6
Berkeley.....	Queen	Duke.	East....	5
Bathurst.....	Adelaide.....	Farley	East....	6
Barton.	125 feet east of Palmerston.....	Bathurst.....	South ..	5
Bloor	Manning.....	Clinton.....	South ...	6
Bright.	King	Queen	East	4
Bright.	King	Queen	West....	4
Bedford.....	Dupont.....	246 feet south.....	West....	5
Bond.....	Gould.....	Wilton.....	East....	5
Berkeley.....	Sydenham.....	Wilton.....	East....	5
Berkeley.....	Sydenham.....	Wilton.....	West....	5
Brook.....	Dundas.....	Frankish.....	East....	5
Brunswick.....	Bloor.....	Lowther	East....	5
Bellwoods	285½ ft. n. of Queen	520 ft. s. of Arthur.	West....	4½
Bond.....	Queen	Shuter.....	West....	5
Bloor	Brook.....	St. Clarens.....	South ..	5
Berti.....	Richmond	115 feet north.....	East....	5
Britain.....	Sherbourne	George	South ...	5
Broadview.....	Simpson	Withrow.....	East....	6
Balmoral.....	Avenue Road	Poplar Plains Road	North ..	5
Brook	Muir.....	Chesley.....	East	5
Bean	252 ft. e. of Glen Rd.	176 feet north.....	West....	5
Bellair.....	Cumberland	Yorkville.....	East	3½
Bellair.....	Cumberland	Bloor.....	East....	4
Bellair.....	Cumberland	Bloor.....	West....	4
Bismarck.....	Park Road.....	East end.....	North ..	4
Brook	Frankish.....	Middleton.....	East....	5
Barton	Christie	Manning.....	North ..	5
Bathurst	Bloor	Dupont	East....	6
Bonstead	656 ft. west Ronces- valles.	Indian Rd	South ..	5
Bernard.....	St. George	Admiral Rd	South ..	5
Borden	Ulster	Bloor	East....	5
Broadview.....	29 ft. n. Gerrard.....	1,000 ft. north	West	6
Beaconsfield	Dundas	Afton	East....	5
Beatrice	922 ft. n. of n.e. cor. College.	57 ft. further north.	West ..	4
Collier	100 ft. e. Yonge.....	Park Rd.....	South ..	5
College	Markham	Clinton	South ..	6
Crescent	Scarth	Park Rd.....	South ..	4
College	Ilhron	368 ft. west.....	South ..	6
Clinton	Bloor	320 ft. north	West ..	5
Cross	Gladstone	Beaconsfield	South ..	4

CONCRETE SIDEWALKS—*Continued.*

Length in Feet.	Curb.		Completed.		Contractor.
	Class.	Length in Feet.			
436.6	.....	.....	July	18, 1908	W. R. Payne.
250.6	.....	.....	July	23, 1908	Crescent Con. Pav. Co.
773.1	.....	.....	Aug.	20, 1908	A. J. Penberthy.
476.4	.....	.....	Aug.	15, 1908	Day labor.
436.5	5-in. concrete....	407.2	Aug.	27, 1908	Reeve Con. Pav. Co.
282.0	.....	.....	Aug.	31, 1908	" " "
510.4	.....	.....	Sept.	9, 1908	A. Johnson.
520.0	.....	.....	Sept.	9, 1908	"
257.8	5-in. concrete....	251.6	Sept.	9, 1908	A. Gardner & Co.
607.4	"	611.4	June	5, 1908	W. R. Payne.
926.7	"	913.2	July	2, 1908	Queen City Con. Pav. Co.
917.7	"	915.3	July	13, 1908	" " "
891.4	"	904.9	Sept.	15, 1908	Reeve Con. Pav. Co.
750.6	.....	.....	Sept.	14, 1908	Ontario Con. Pav. Co.
1,060.0	.....	.....	June	29, 1908	J. J. Thompson.
556.7	.....	.....	Oct.	2, 1908	Ontario Con. Pav. Co.
556.0	.....	.....	Oct.	3, 1908	Day labor, order of Council
115.0	.....	.....	Oct.	2, 1908	Ontario Con. Pav. Co.
676.5	5-in. concrete....	643.0	Oct.	17, 1908	Queen City Con. Pav. Co.
1,957.0	.....	.....	May	1, 1908	Ontario Con. Pav. Co.
608.0	.....	.....	May	19, 1908	Day labor.
282.2	.....	53.1	June	12, 1908	W. R. Payne.
218.0	.....	.....	Oct.	9, 1908	A. Gardner & Co.
265.2	5-in. concrete....	265.2	Oct.	21, 1908	Queen City Con. Pav. Co.
287.0	.....	.....	Oct.	20, 1908	" " "
279.0	.....	.....	Oct.	22, 1908	" " "
495.7	.....	.....	June	12, 1908	A. Gardner & Co.
407.0	5-in. concrete....	432.0	June	25, 1908	Ontario Con. Pav. Co.
616.6	.....	.....	June	18, 1908	W. R. Payne.
2,925.6	6-in. concrete....	9.5	July	22, 1908	Crescent Con. Pav. Co.
419.8	5-in. "	419.8	July	7, 1908	Grant Contracting Co.
312.5	.....	.....	June	29, 1908	W. R. Payne.
1,938.3	5-in. concrete....	1,922.3	Oct.	29, 1908	Crescent Con. Pav. Co.
1,010.0	.....	.....	Oct.	24, 1908	Day labor, Order of Coun.
948.5	5-in. concrete....	936.5	Nov.	3, 1908	W. R. Payne.
56.8	"	56.8	Nov.	19, 1908	Day labor, Order of Coun.
577.0	.....	.....	Oct.	22, 1908	Queen City Con. Pav. Co.
1,244.5	5-in. concrete....	110.4	June	8, 1908	Ontario Con. Pav. Co.
217.3	.....	.....	Oct.	21, 1908	Day labor.
290.4	.....	.....	Oct.	20, 1908	"
408.0	.....	407.0	Aug. 4, 1908	{ Godson Cont'g Co.—curb. Day labor—walk.	
365.9	5-in. concrete....	26.0	Oct.	15, 1908	J. J. Thomson.

CONCRETE SIDEWALKS—*Continued.*

Street.	From.	To.	Side.	Width Feet
Cinder	Crawford	Montrose	South ..	4
Constance	Roncesvalles	Sunnyside	North ..	5
Constance	Roncesvalles	Sunnyside	South ..	5
Carr	Esther	Ryerson	South ..	5
College	22 ft. w. Manning	Montrose	North ..	6
Chestnut	62 ft. 3 in. n. Agnes	Hayter	East ..	5
Chestnut	Elm	136 ft. south	West ..	5
Campbell	Royce	Antler	West ..	5
Carlaw	Bain	Dingwall	East ..	5
Clarence Sq	Spadina	Wellington	S. & E. ..	5
College	Roncesvalles	Sorauren	South ..	5
Crocker	Bellwoods	East end	North ..	4
Concord	Bloor	Hallam	East ..	5
Castle	Kendall	142 ft. east	North ..	5
Cinder	Crawford	Montrose	North ..	4
Czar	Yonge	North St	South ..	5
Clarke	Grant	Bolton	North ..	4
Clarke	Grant	Bolton	South ..	4
Carr	Ryerson	West end	South ..	4
Cross	Gladstone	Beaconsfield	North ..	4
Coxwell	Queen	200 ft. north	West ..	5
Clifford	Strachan	Stanley Park	North ..	4
Casimir	St. Patrick	North end	West ..	4
Carlaw	Queen	Eastern	East ..	5
College	Sheridan	Lansdowne	North ..	5
Commercial Lane	Jarvis	Francis	South ..	4
Curzon	Queen	Sproatt	West ..	5
**Conduit	Dundas	West end	South ..	5
Defoe	Shaw	Niagara	North ..	5
Dublin	St. Helens	West end	South ..	4
Dublin	St. Helens	West end	North ..	4
Dora	St. Helens	West end	South ..	4
Dresden	Pape	Carlaw	South ..	5
Dundas	Ossington	Rusholme	North ..	6
Davenport	Dupont	Bedford	E. & N. ..	5
Davies	Queen	Matilda	East ..	4½
Dresden	Pape	Carlaw	North ..	5
Dearbourne	Broadview	Bowden	South ..	5
Dundas	Lisgar	Dufferin	South ..	6
Dufferin	Bloor	416 ft. south	West ..	5
Dupont	Kendall	Howland	North ..	5
Dalhousie	Shuter	Gould	East ..	5
Dundas	Rusholme	Lansdowne	North ..	6
Division	Humon	Spadina	South ..	5

CONCRETE SIDEWALKS—Continued.

Length in Feet.	Curb.		Completed.		Contractor.
	Class.	Length in Feet.			
262.4	5-in. concrete	255.4	July 24, 1908	W. R. Payne.	
572.0	"	564.0	Oct. 16, 1908	Day labor.	
572.3	"	564.3	Oct. 15, 1908	"	
472.9	"	"	July 3, 1908	W. R. Payne.	
1,423.6	5-in. concrete	109.0	June 25, 1908	Stinson & Grummett.	
1,173.6	"	42.3	Oct. 3, 1908	Crescent Con. Pav. Co.	
139.4	"	"	Sept. 2, 1908	Day labor.	
623.1	"	"	Sept. 9, 1908	Crescent Con. Pav. Co.	
250.3	5-in. concrete	239.5	Aug. 28, 1908	Queen City Con. Pav. Co.	
545.9	"	521.6	June 20, 1908	Excelsior Constructing & Paving Co.	
1,372.8	"	"	Sept. 2, 1908	Ontario Con. Pav. Co.	
433.9	"	"	Aug. 19, 1908	Day labor.	
2,181.2	"	"	June 3, 1908	T. E. McMurray.	
157.6	5-in. concrete	162.1	May 16, 1908	Crescent Con. Pav. Co.	
246.6	"	237.6	July 22, 1908	W. R. Payne.	
650.9	"	"	May 12, 1908	Crescent Con. Pav. Co.	
428.2	"	"	July 9, 1908	W. R. Payne.	
462.2	5-in. concrete	21.0	July 9, 1908	"	
160.0	"	150.0	July 13, 1908	Reeve Con. Pav. Co.	
367.6	"	26.0	Oct. 16, 1908	J. J. Thomson.	
205.8	"	221.8	July 9, 1908	A. Gardner & Co.	
482.2	"	482.2	June 30, 1908	Excelsior Constructing & Paving Co.	
193.4	"	"	June 27, 1908	Reeve Con. Pav. Co.	
953.8	"	"	June 1, 1908	A. Gardner & Co.	
1,384.6	"	"	Nov. 12, 1908	E. H. Schoales.	
125.6	5-in. concrete	125.6	Oct. 27, 1908	Queen City Con. Pav. Co.	
1,938.0	"	"	Nov. 26, 1908	A. Gardner & Co.	
74.0	5-in. concrete	78.0	May 5, 1908	R. A. Rogers & Co.	
1,681.6	"	"	Aug. 6, 1908	Reeve Con. Pav. Co.	
276.0	5-in. concrete	276.0	April 17, 1908	W. R. Payne.	
276.0	"	276.0	April 16, 1908	"	
278.5	"	278.5	April 23, 1908	"	
613.0	"	600.0	May 2, 1908	Queen City Con. Pav. Co.	
1,463.5	"	"	Sept. 5, 1908	W. R. Payne.	
836.7	5-in. concrete	13.0	April 29, 1908	Reeve Con. Pav. Co.	
396.5	6-in. concrete	25.3	April 15, 1908	Day labor.	
612.8	5-in. concrete	601.2	Sept. 21, 1908	Ontario Con. Pav. Co.	
1,151.2	"	1,146.2	Sept. 23, 1908	Queen City Con. Pav. Co.	
1,141.0	"	"	Sept. 26, 1908	W. R. Payne.	
423.0	5-in. concrete	416.0	Oct. 2, 1908	Day labor (order of Council)	
634.9	"	"	Oct. 7, 1908	Day labor.	
1,172.7	5-in. concrete	1,115.0	May 27, 1908	Excelsior Con. & Pav. Co.	
3,287.0	"	"	Oct. 10, 1908	W. R. Payne.	
442.0	"	"	June 10, 1908	"	

CONCRETE SIDEWALKS—Continued.

Street.	From.	To.	Side.	Width Feet.
Dovercourt	Bloor	Van Horne	East	5
Duncan	84 ft. n. of Adelaide	Richmond	West	5
Dufferin	King	Queen	East	5
Denison	Queen	Bellevue Place	West	5
Dewson	Ossington	Delaware	South	5
Dovercourt	Shanly	Van Horne	West	5
Dagmar	275 ft. e. of Pape	Brooklyn	South	5
Dufferin	College	Sylvan	East	5
Doel	Leslie	Curzon	North	4
Davenport	Bedford	635 ft. w. of Avenue Rd.	North	5
Emerson	495 n. of Wallace	Lappin	West	5
Empress Crescent	Jameson	Dunn	South	5
Emerson	Wallace	495 ft. north	West	5
Elm	Glen Road	252 ft. east	North	5
Elizabeth	Queen	Edward	West	6
Euclid	Arthur	College	East	5
Empress Crescent	Jameson	Dunn	North	5
Elizabeth	s.s. first lane n. of College.	Grenville	East	5
Eastern	Broadview	Morse	North	5
Emily	King	Wellington	East	4
Emily	King	Wellington	West	4
Evans	Clinton	West end	South	4
Eden Place	Bathurst	East end	North	4
Emerson	434 ft. n. of Bloor	Paton Road	East	5
Emerson	Paton Road	Wallace	West	5
Eastern	Carlaw	Morse	North	5
Empress Cres.	Jameson	Dowling	North	5
Evans	Clinton	247 ft. west	North	4
Foxbar	Avenue Rd.	St. Clair	N. & W.	5
Front	91 ft. w. of Yonge	Bay	North	10-11½
Forrest Hill	St. Clair	Heath	East	5
Forrest Hill	Heath	Lonsdale	East	5
Follis	Palmerston	Manning	North	5
Fraser	Liberty	Rly. tracks	East	5
Fenwick	Danforth	600 ft. south	West	4
Fenwick	Danforth	600 ft. south	East	4
Farley	Bathurst	Tecumseth	North	5
Frederick	42 ft. n. of King	Duke	East	5
Fern	Roncesvalles	Sunnyside	North	5
Fern	Roncesvalles	Sunnyside	South	5
First	De Grassi	Bolton	South	5
Front	Cherry	Trinity	South	5
Front	Princess	Sherbourne	North	5

CONCRETE SIDEWALKS—Continued.

Length in Feet.	Curb.		Completed.	Contractor.
	Class.	Length in feet.		
3,085.2	.....	.....	June 29, 1908	T. E. McMurray.
306.1	.....	.....	July 3, 1908	Crescent Con. Pav. Co.
1,137.7	.....	.....	May 16, 1908	" "
1,728.3	6-in. concrete....	96.0	June 15, 1908	" "
649.5	"	27.3	July 21, 1908	Const'g & Pav. Co.
1,988.3	.....	.....	July 13, 1908	Ontario Con. Pav. Co.
175.8	.....	.....	July 3, 1908	Day labor.
707.1	5-in. concrete....	652.2	Nov. 14, 1908	William Bushell.
287.5	"	270.5	Nov. 12, 1908	Queen City Con. Pav. Co.
189.5	.....	.....	Nov. 14, 1908	Day labor.
443.5	5-in. concrete....	427.7	Oct. 30, 1908	Excelsior Con. & Pav. Co.
764.0	"	773.0	May 13, 1908	W. R. Payne.
495.0	"	495.0	May 12, 1908	Grant Contracting Co.
280.0	"	256.0	Oct. 9, 1908	A. Gardner & Co.
1,581.6	.....	.....	May 22, 1908	" "
1,504.4	.....	.....	May 23, 1908	Grant Contracting Co.
785.6	5-in. concrete	790.1	May 13, 1908	W. R. Payne.
116.0	.....	.....	Oct. 7, 1908	Day labor.
2,171.9	5-in. concrete....	2,200.9	Oct. 5, 1908	Excelsior Con. & Pav. Co.
437.0	"	3.0	Sept. 17, 1908	Crescent Con. Pav. Co.
436.9	.....	.....	Sept. 16, 1908	" "
291.3	5-in. concrete....	278.0	June 5, 1908	" "
335.4	"	335.4	July 25, 1908	W. R. Payne.
368.3	"	368.3	June 19, 1908	Const'g & Pav. Co.
617.0	"	621.5	June 12, 1908	Crescent Con. Pav. Co.
316.7	"	66.5	Oct. 23, 1908	Excelsior Con. & Pav. Co.
858.2	.....	.....	May 28, 1908	W. R. Payne.
273.0	5 in. concrete....	262.0	Nov. 10, 1908	Grant Con. Co.—walk. (Barber A. Pv. Co.—curb.
1,266.8	"	1,258.8	July 24, 1908	Day labor, order of Council
341.1	"	388.7	June 9, 1908	A. Gardner & Co.
738.0	"	738.0	Sept. 9, 1908	Excelsior Con. & Pav. Co.
682.6	"	682.6	Aug. 29, 1908	" "
624.7	"	596.4	June 27, 1908	W. R. Payne.
772.7	.....	.....	Oct. 7, 1908	Crescent Con. & Pav. Co.
600.0	.....	.....	Oct. 16, 1908	A. Johnson.
639.0	.....	.....	Oct. 16, 1908	" "
648.0	5 in. concrete....	25.3	Oct. 10, 1908	Crescent Con. & Pav. Co.
168.0	.....	.....	May 21, 1908	Grant Contracting Co.
548.2	5 in. concrete	541.2	Nov. 2, 1908	William Bushell.
548.3	"	541.3	Oct. 30, 1908	" "
218.0	.....	.....	July 2, 1908	Day labor.
599.6	.....	.....	Aug. 10, 1908	" "
274.8	.....	.....	Aug. 12, 1908	" "

CONCRETE SIDEWALKS—*Continued.*

Street.	From.	To.	Side.	Width Feet.
Front	Trinity	Cherry	North ..	5
Gladstone	Dundas	Cross	East	5
Gerrard	Logan	Pape	South ...	5
Geoffrey	Roncesvalles	Sunnyside	North ...	5
Geoffrey	Roncesvalles	Sunnyside	South ...	5
Graham Pl.	McGee	East end	North ...	4
Golden	Dundas	Silver	East	4½
Galt	Gerrard	234 ft. south	East	4
Grange Road	Beverley	McCaul	North ...	5
Geoffrey	Sorauren	Roncesvalles	North ...	5
Givens	Halton	Bruce	East	5
Grandview	Logan	643 ft. west	North ...	4
Grandview	Logan	643 ft. west	South ...	4
Gladstone	Dundas	336 ft. north	East	5
Glen Rd.	South Drive	Bridge	West	6
Gloucester	Yonge	Church	North ...	5
Geneva	Sumach	East end	North ...	4
Grace	1,744 ft. n. of n.e. cor. of College.	160 ft. further n. ...	East	5
Grace	1,494 ft. n. of n.e. cor. of College.	250 ft. further n. ...	East	5
Grace	1,744 ft. n. of n.e. cor. of College.	160 ft. further n. ...	West	5
Grace	1,494 ft. n. of n.e. cor. of College.	250 ft. further n. ...	West	5
Gloucester	Yonge	Church	South ...	5
Gladstone	Trafalgar	Dundas	West ...	5
Gerrard	Parliament	Sackville	North ...	6
George	Duke	Duchess	East	6
Glen Road	Howard	Bridge	West ...	5
Givens	Argyle	Halton	West ...	5
Huron	College	Division	West ...	5
Havelock	160 ft. n. of College	Dewson	East ...	5
Hamburg	Bloor	Shanly	East ...	5
Harbord	Spadina	Huron	South ...	5
Harbord	Manning	Clinton	South ...	5
Havelock	Lindsay	27 ft. n. of Sylvan ..	West ...	5
Hickson	Brook	St. Clarens	North ...	4½
High Park Boulevard	Roncesvalles	Sunnyside	South ...	6
Hallam	Westmoreland	Hamburg	North ...	5
Howard	Parliament	Glen Road	North ...	6
Hampton	Hogarth	Danforth	West ...	5
Harcourt	Carlton	Pape	North ...	5
Howland	Barton	Wells	West ...	5
Hayter	La Plante	Teranley	South ...	5
Hogarth	Broadview	340 feet east	South ...	5

CONCRETE SIDEWALKS—*Continued.*

Length in Feet.	Curb.		Completed.	Contractor.
	Class.	Length in Feet.		
514.9	.....	.....	July 16, 1908	A. Johnson.
844.5	.....	.....	Oct. 29, 1908	J. J. Thomson.
1,328.3	.....	.....	Oct. 1, 1908	A. Johnson.
561.3	5 in. concrete.	562.8	July 24, 1908	Excelsior Con. & Pav. Co.
564.0	"	564.0	Aug. 20, 1908	" "
133.3	.....	.....	Oct. 17, 1908	A. Gardner & Co.
249.5	.....	.....	Oct. 13, 1908	Excelsior Con. & Pav. Co.
239.5	5 in. concrete.	233.2	Sept. 28, 1908	Ontario Concrete Pav. Co.
616.8	"	626.0	July 25, 1908	" "
1,384.0	.....	.....	July 24, 1908	Crescent Con. Pav. Co.
953.5	5 in. concrete	947.5	July 9, 1908	Ontario Con. Pav. Co.
643.6	.....	.....	Sept. 11, 1908	Queen City Con. Pav. Co.
644.7	.....	.....	Sept. 9, 1908	" "
322.6	.....	.....	Sept. 18, 1908	W. R. Payne.
253.0	.....	.....	June 29, 1908	Crescent Con. & Pav. Co.
955.7	5 in. concrete	937.4	Aug. 4, 1908	Queen City Con. Pav. Co.
414.6	"	27.5	Aug. 8, 1908	A. Johnson.
160.0	.....	.....	July 28, 1908	Constructing & Pav. Co.
250.0	.....	250.0	July 27, 1908	" "
160.0	.....	.....	Aug. 1, 1908	" "
250.2	.....	250.2	Aug. 1, 1908	" "
944.6	5 in. concrete	941.0	July 27, 1908	Queen City Con. Pav. Co.
1,046.0	.....	.....	June 22, 1908	Ontario Concrete Pav. Co.
785.3	.....	.....	May 6, 1908	Day labor.
425.8	.....	.....	May 16, 1908	Grant Contracting Co.
417.7	.....	.....	May 2, 1908	" "
482.3	5 in. concrete	485.2	May 16, 1908	W. R. Payne.
258.5	.....	.....	May 20, 1908	Crescent Con. Pav. Co.
766.5	5 in. concrete	771.0	May 15, 1908	J. J. Thompson.
1,137.0	.....	1,141.0	July 25, 1908	Grant Contracting Co.
501.3	5 in. concrete	467.8	May 28, 1908	Crescent Con. Pav. Co.
274.6	"	257.4	May 29, 1908	Leach Concrete Co.
374.2	.....	.....	Sept. 19, 1908	Crescent Con. Pav. Co.
643.7	5 in. concrete	628.7	July 31, 1908	W. R. Payne.
567.3	.....	.....	Aug. 24, 1908	Ontario Con. Pav. Co.
938.4	6 in. concrete	3.0	July 2, 1908	Grant Contracting Co.
1,007.9	.....	.....	Sept. 1, 1908	A. J. Pemberthy.
1,131.7	5 in. concrete	1,132.7	Sept. 4, 1908	A. Gardner & Co.
613.3	"	602.0	Aug. 25, 1908	" "
776.5	.....	.....	Sept. 16, 1908	Grant Contracting Co.
185.6	.....	.....	Sept. 26, 1908	A. J. Pemberthy.
344.9	.....	.....	Sept. 25, 1908	Queen City Con. Pav. Co.

CONCRETE SIDEWALKS—*Continued.*

Street.	From.	To.	Side.	Width Feet.
Hayter	Yonge	Chestnut	North ..	5
Hamilton	Kintyre	Gerrard	West. ..	4
Howard	Ontario	Rose	South ..	5
Havelock	Bloor.	N. s. Hepbourne (Prod.)	West. ..	5
Havelock	757 ft. s. of Bloor.	213 ft. 3 in. further s	West. ..	5
Hallam	Dovercourt	Westmoreland	North ..	5
Harrison	Ossington	Lakéview	South ..	5
Hamburg	Shanly	Hallam	East.	5
Hamburg	Hallam	Van Horne	West.	5
Howard Park Ave ..	Dundas	Roncesvalles	South ..	5
Hickory	St. Patrick	North end	West.	4
Hallam	Dovercourt	Delaware	South ..	5
Huntley	120 ft. n. of Elm ..	South Drive	West.	5
Huntley	Elm	120 feet north	West.	5
Hampton	Sparkhall	Hogarth	East.	5
Harcourt	Pape	Carlaw	South ..	5
Iroquois	Manitou	St. Andrews	South ..	6
James	Queen	Albert	West.	6
John	King	Wellington	West.	6
Jones	Gerrard	G. T. R.	East.	5
John	King	Wellington	East.	6
Jones	G. T. R.	N. s. Hazelwood (Prod.)	East.	5
John	Wellington	Front.	West.	6
Knox	Eastern	Queen	West.	5
King	Spadina	Bathurst	South ..	6
King	Atlantic	165 ft. east	South ..	6
King	Mowat	108 ft. east	South ..	6
King	Dufferin	Mowat	South ..	6
King	133 ft. e. of Strachan	Stanley Terrace ..	North ..	6
Lynd	College	Neepawa	West.	5
Lake Front	Woodbine	746 ft. east	North ..	5
Langley	1,272 ft. east of Broadview.	Logan	North ..	5
Lappin	Emerson	Lansdowne	North ..	5
Lennox	Borden	Bathurst	North ..	4
Lennox	Borden	Bathurst	South ..	4
Lindsay	Havelock	Gladstone	North ..	5
Lindsay	Havelock	Gladstone	South ..	5
Lewis	Queen	Eastern	West.	5
Louisa	Elizabeth	Chestnut	North ..	5
Louisa	Elizabeth	Chestnut	South ..	5
Leslie	Gerrard	N.s. Harriett	West.	5
Lee	Queen	North City limits ..	West.	4
Lisgar North	Afton	MacKenzie Cres ..	East.	5

CONCRETE SIDEWALKS—Continued.

Length in Feet.	Curb.		Completed.	Contractor.
	Class.	Length in Feet.		
1,262.3	.....	.....	Sept. 28, 1908	A. J. Pemberthy.
1,827.5	.....	.....	Oct. 13, 1908	" "
312.5	.....	.....	Oct. 19, 1908	Queen City Con. Pav. Co.
757.0	.....	.....	Oct. 19, 1908	W. R. Payne.
213.3	.....	.....	Oct. 19, 1908	" "
278.3	.....	.....	July 4, 1908	T. E. McMurray.
461.4	.....	.....	May 22, 1908	W. R. Payne.
1,062.8	5-in. concrete....	1,049.8	April 29, 1908	Excelsior Con. & Pav. Co.
945.5	"	912.0	May 4, 1908	" " "
707.7	.....	.....	May 8, 1908	Dominion Con. Pav. Co.
201.6	5-in. concrete....	201.6	July 3, 1908	Reeve Con. Pav. Co.
286.0	.....	290.0	July 31, 1908	Day labor.
467.3	.....	.....	Aug. 12, 1908	Crescent Con. Pav. Co.
147.5	.....	.....	Aug. 12, 1908	" " "
672.1	5-in. concrete....	673.1	Sept. 9, 1908	Reeve Con. Pav. Co.
613.3	"	602.0	Aug. 25, 1908	A. Gardner & Co.
1,730.8	.....	.....	Aug. 26, 1908	Day labor.
339.6	6-in. concrete....	398.6	May 6, 1908	Day labor, order of Council
434.2	5-in. concrete....	435.5	May 27, 1908	Leach Concrete Co.
987.8	"	989.0	May 2, 1908	Enterprise Contract'g Co.
447.1	"	467.2	May 27, 1908	Leach Concrete Co.
2,569.9	"	2,601.9	Aug. 26, 1908	Queen City Con. Pav. Co.
374.7	"	20.0	July 27, 1908	Ontario Con. Pav. Co.
582.0	5-in. concrete....	582.0	Sept. 17, 1908	Queen City Con. Pav. Co.
1,741.2	.....	.....	May 28, 1908	Day labor.
184.0	.....	.....	Aug. 25, 1908	W. R. Payne.
126.5	.....	.....	Aug. 26, 1908	" "
320.0	.....	.....	June 29, 1908	Day labor, Order of Coun.
298.0	.....	411.0	June 20, 1908	Crescent Con. Pav. Co.
529.9	5-in. concrete....	411.2	Oct. 10, 1908	Day labor, Order of Coun.
722.1	.....	.....	May 9, 1908	A. Johnson.
659.0	.....	.....	Aug. 20, 1908	" "
509.6	5-in. concrete....	498.6	June 10, 1908	Universal Paving Co.
577.3	.....	.....	Oct. 19, 1908	Grant Contracting Co.
577.6	.....	.....	Oct. 10, 1908	" "
384.2	.....	.....	Nov. 7, 1908	Day labor.
406.0	.....	.....	Nov. 6, 1908	" "
951.6	.....	.....	May 29, 1908	Queen City Con. Pav. Co.
184.3	.....	.....	June 8, 1908	Dominion Con. Pav. Co.
184.0	.....	.....	June 6, 1908	" "
736.3	5-in. concrete....	740.8	Nov. 2, 1908	Day labor.
198.0	"	198.0	June 23, 1908	E. H. Schoales.
495.7	"	500.2	Sept. 3, 1908	Crescent Con. Pav. Co.

CONCRETE SIDEWALKS—*Continued.*

Street.	From.	To.	Side.	Width Feet.
Leonard	Nassau	Bellevue	West ..	5
Logan	Tracks	188 ft. n. of Natalie ..	East ..	5
Lindsay	Dufferin	Brock	North ..	4
Moss Park Place ..	Sherbourne	West end	South ..	5
Marion	Roncesvalles	Sunnyside	South ..	5
Marion	Roncesvalles	Sunnyside	North ..	5
Marmaduke	Roncesvalles	Sunnyside	South ..	5
Marmaduke	Roncesvalles	Sunnyside	North ..	5
Mill	Trinity	Cherry	North ..	5
Montrose	Arthur	Cinder	West ..	5
Montrose	Arthur	College	East ..	5
Muir	200 ft. e. of Sheridan ..	Dufferin	South ..	4
Mercer	John	Peter	North ..	5
Markham	Arthur	College	West ..	5
Muir	Brock	Sheridan	South ..	4
Margueretta	College	Bloor	East ..	5
Margueretta	College	Bloor	West ..	5
Major	Bloor	Lowther	East ..	5
Major	Bloor	Lowther	West ..	5
Maitland	Yonge	Church	South ..	5
Macpherson	Yonge	Avenue Rd	North ..	5
Mutual	167 ft. n. of Carlton ..	75 ft. s. of Maitland ..	East ..	4
Manning	Robinson	Arthur	East ..	5
Manning	Robinson	Arthur	West ..	5
Manning	Arthur	Plymouth	West ..	5
Manning	Mansfield	Henderson	West ..	5
Mansfield	Manning	Claremont	South ..	5
Mutual	167 ft. n. of Carlton ..	Alexander	West ..	4
Manning	Plymouth	Mansfield	West ..	5
Montrose	Sully Cres	Cinder	West ..	5
Mackenzie Cres ..	Beaconsfield	North Lisgar	North ..	4
Mackenzie Cres ..	Beaconsfield	North Lisgar	South ..	4
Niagara	Bathurst	Portland	North ..	5
Niagara	140 ft. s. of King ..	Wellington	West ..	5
Northumberland ..	Concord	Ossington	North ..	4
Niagara	King	140 ft. south	West ..	5
Niagara	Bathurst	Tecumseth	North ..	5
Natalie	Booth	Logan	North ..	4
Neebawa	W. limit of Lot 13 ..	Roncesvalles	North ..	5
Napier	Munro	West end	North ..	4
Napier	Munro	West end	South ..	4
Ontario	Duke	Duchess	East ..	5
Oriole	Heath	Lonsdale	West ..	5
Oriole	St. Clair	Heath	East ..	5
Oxford	Augusta	Bellevue	South ..	5
Olive	Bathurst	Palmerston	South ..	5

CONCRETE SIDEWALKS—*Continued.*

Length in Feet.	Curb.		Completed.	Contractor.
	Class.	Length in Feet.		
671.0			July 2, 1908	W. R. Payne.
906.5			Nov. 2, 1908	Queen City Con. Pav. Co.
941.6			Nov. 16, 1908	T. E. McMurray.
208.7	5-in. concrete	206.7	Aug. 5, 1908	Queen City Con. Pav. Co.
523.3	"	516.3	Oct. 21, 1908	William Bushell.
522.5	"	515.5	Oct. 16, 1908	"
570.0	"	563.0	Oct. 13, 1908	Day labor.
570.8	"	563.8	Oct. 12, 1908	"
598.4	"	598.4	Oct. 12, 1908	Excelsior Con. & Pav. Co.
1,279.2	"	1,290.2	July 7, 1908	Crescent Con. Pav. Co.
1,827.0		1,833.5	June 25, 1918	"
322.0	6-in. concrete	326.0	June 9, 1908	T. E. McMurray.
660.2			May 19, 1908	Day labor.
1,500.7	5-in. concrete	22.3	June 16, 1908	Ontario Con. Pav. Co.
452.5	"	457.0	May 21, 1908	J. J. Thomson.
2,688.0	"	2,688.0	June 9, 1908	Grant Contracting Co.
2,688.0	"	2,688.0	June 18, 1908	"
770.7	5-in. concrete	785.3	May 1, 1908	"
770.1	"	783.6	May 1, 1908	"
958.7	"	965.0	April 30, 1908	Leach Concrete Co.
1,965.5	"	1,959.4	May 6, 1908	Crescent Con. Pav. Co.
757.9	"	757.9	May 1, 1908	"
1,281.7			Sept. 18, 1908	Day labor.
1,336.6			Sept. 28, 1908	"
219.0	5-in. concrete	219.0	May 5, 1908	Grant Contracting Co.
204.6	"	208.6	May 5, 1908	"
135.0			Aug. 31, 1908	Reeve Con. Pav. Co.
432.6	5-in. concrete	12.5	April 4, 1908	Crescent Con. Pav. Co.
691.7	"	696.2	Nov. 10, 1908	Grant Contracting Co.
278.7	"	287.2	Aug. 21, 1908	Day labor.
224.0	"	224.0	Oct. 28, 1908	W. R. Payne.
241.0	"	241.0	Oct. 25, 1908	"
685.4	"	699.0	Oct. 27, 1908	Ontario Con. Pav. Co.
343.2			Oct. 21, 1908	"
293.3	5-in. concrete	260.3	June 19, 1908	Grant Contracting Co.
138.7			June 6, 1908	"
665.0			July 16, 1908	Reeve Con. Pav. Co.
268.5	5-in. concrete	238.7	May 20, 1908	Queen City Con. Pav. Co.
278.2	"	289.2	July 4, 1908	Grant Contracting Co.
334.5			Oct. 26, 1908	Day labor.
334.5			Oct. 30, 1908	"
455.8			Oct. 16, 1908	R. A. Rogers.
684.3	5-in. concrete	684.3	July 7, 1908	Day labor.
740.5	"	740.5	Oct. 6, 1908	Reeve Con. Pav. Co.
316.1	"	316.1	Sept. 5, 1908	Day labor.
618.8			Aug. 24, 1908	Reeve Con. Pav. Co.

CONCRETE SIDEWALKS—Continued.

Street.	From.	To.	Side.	Width Feet.
Oriole	Heath	Lonsdale.....	East...	5
Olive	Manning	Palmerston	South ..	5
Ongiara (on Island) ..	Lake Shore	Iroquois	Centre ..	5
Ontario	Wellesley	St. James	East	5
Ontario	Queen	Sydenham	East	5
Ontario	Queen	N.s.Syd'nh'm(prod.)	West	5
Oxford	Bellevue	Lippincott	North	5
Pape	s.s. Bain (prod.) ..	Danforth	East	5
Power	King	218 ft. north	East	6
Pearson	Roncesvalles	Sunnyside	South	5
Pearson	Roncesvalles	Sunnyside	North	5
Pears	Avenue Road	123 ft. e. of Bedford	North	5
Parliament	40 ft. n. of Prospect	Wellesley	West	6
Parliament	Carlton	Winchester	West	6
Palmerston	London	Seaton Sq	East	5
Perth	Hugo	Addison	West	4
Palmerston	Queen	Robinson	East	5
Palmerston	Queen	Robinson	West	5
Parliament	85 ft. s. of Winchester	Carlton	East	8
Peel	Dufferin	Gladstone	South ..	5
Palmerston	Olive	Dupont	East	5
Palmerston	Arthur	College	East	5
Parliament	n. limit of No. 308	1st lane n. of Wilton	West	8
Queen	Vanauley	144 ft. east	North ..	11
Queen	Pape	Kingston Rd. ...	North ..	6
Queen	Wheeler	Lee	North ..	5
Queen	Callendar	Roncesvalles	North ..	6
Queen	770 ft. e. of Lee ...	East City limit	South ..	5
Queen	Woodbine	Wheeler	North ..	5
Queen	Lewis	111 ft. west	South ..	6
Queen	50 ft. e. of Dovercourt	93 ft. further east ..	South ..	10
Robinson	Euclid	Bellwoods	South ..	5
Ritchie	Dundas	North end	West	5
Rebecca	Givens	Dundas	South ..	4
Robinson	Euclid	Manning	North ..	5
Riverdale	Broadview	e. limit of No. 98 ..	North ..	5
Russett	762 ft. n. of Bloor ..	987 ft. n. of Bloor ..	West	4
Robinson	Palmerston	Markham	South ..	5
Robinson	Bathurst	Markham	South ..	5
Riverdale	Logan	Carlaw	North ..	5
Radenhurst	River	Defries	North ..	4
Russell	Spadina	Robert	North ..	4
Russell Hill Rd.	Poplar Plains	St. Clair	E. & N. ..	5
Rusholme	St. Anne's	Dundas	East	5
Rusholme	College	St. Anne's	West	5
Rowanwood	429 ft. e. of Yonge ..	W.s. Cluny (prod.) ..	North ..	4½

CONCRETE SIDEWALKS—Continued.

Length in Feet.	Curb.		Contractor.	Completed
	Class.	Length in Feet.		
684.0	5-in. concrete....	684.0	July 31, 1908	E. H. Schoales.
625.0	.....	.....	June 22, 1908	W. R. Payne.
649.7	.....	.....	June 12, 1908	Day labor.
554.0	.....	.....	June 16, 1908	Queen City Con. Pav. Co.
443.3	.....	.....	May 14, 1908	" "
502.5	.....	.....	May 16, 1908	" "
502.0	5-in. concrete....	506.5	June 26, 1908	Day labor.
2,168.2	.....	.....	Oct. 30, 1908	A. Gardner & Co.
198.5	.....	.....	Oct. 10, 1908	Ontario Con. Paving Co.
527.5	5 in. concrete....	520.0	Oct. 12, 1908	William Bushell.
546.3	"	522.0	Oct. 7, 1908	"
633.6	"	630.1	Aug. 28, 1908	Grant Contracting Co.
332.8	.....	.....	Aug. 11, 1908	Queen City Con. Pav. Co.
522.9	.....	.....	Sept. 24, 1908	Ontario Con. Paving Co.
132.7	.....	.....	June 2, 1908	Reeve Concrete Pav. Co.
190.8	5 in. concrete....	190.8	June 3, 1908	E. H. Schoales.
573.0	"	547.2	May 27, 1908	Reeve Concrete Pav. Co.
600.2	"	578.5	May 21, 1908	" "
401.0	.....	.....	July 13, 1908	Ontario Con. Paving Co.
365.0	5 in. concrete....	361.0	May 29, 1908	J. J. Thomson.
1,031.4	.....	.....	June 1, 1908	Reeve Concrete Pav. Co.
1,490.0	.....	.....	June 1, 1908	Ontario Con. Paving Co.
208.5	5 in. concrete....	50.5	Nov. 4, 1908	A. Johnson.
151.8	.....	.....	July 29, 1908	Ontario Con. Paving Co.
6,546.0	5 in. concrete....	6.4	May 15, 1908	Schoales & McMurray.
231.0	"	34.0	Aug. 5, 1908	A. Johnson.
968.8	.....	.....	June 30, 1908	Ontario Con. Paving Co.
1,047.0	.....	.....	June 17, 1908	E. H. Schoales.
1,596.4	.....	.....	Nov. 4, 1908	R. A. Rogers.
127.3	.....	.....	May 26, 1908	Queen City Con. Pav. Co.
92.8	.....	.....	Nov. 7, 1908	Day labor.
790.0	5 in. concrete....	802.7	May 13, 1908	Reeve Concrete Pav. Co.
553.8	"	566.8	Oct. 17, 1908	W. R. Payne.
324.3	"	324.3	May 30, 1908	E. H. Schoales.
315.3	"	312.2	Oct. 22, 1908	Reeve Concrete Pav. Co.
1,103.7	"	1,101.0	Oct. 10, 1908	Queen City Con. Pav. Co.
224.0	.....	.....	Oct. 3, 1908	Day labor, order of Council
261.7	.....	.....	Oct. 8, 1908	Day labor.
268.5	.....	.....	Oct. 8, 1908	"
623.0	5 in. concrete....	615.0	Oct. 6, 1908	Queen City Con. Pav. Co.
281.3	"	284.3	Aug. 31, 1908	Day labor.
217.2	.....	.....	July 6, 1908	Reeve Concrete Pav. Co.
2,393.9	.....	.....	Aug. 27, 1908	Grant Contracting Co.
630.9	.....	.....	Aug. 26, 1908	E. H. Schoales.
659.7	5-in. concrete ..	30.0	Aug. 21, 1908	" "
466.8	.....	.....	Aug. 21, 1908	Crescent Con. Pav. Co.

CONCRETE SIDEWALKS—*Continued.*

Street.	From.	To.	Side.	Width Feet.
Rowanwood.....	Cluny	Searth.....	South ..	4½
Riverdale.....	1,126 ft. e. of Broad- view	Logan	South ..	5
Richmond	Jarvis	158 feet west.....	South ..	6
Reid	Queen	North City limit.....	East	4
River	King	Queen	West	5
Renfrew Place	McCauley	St. Patrick Square.....	South ..	4
Reid	180 ft. e. Sackville.....	82 feet further east.....	South ..	4
Roncesvalles.....	Hewitt	Bonstead	West	5
Roncesvalles.....	Queen	167 ft. n. of Grafton.....	East	5
Riverdale.....	926 ft. e. Broadview.....	200 feet further east.....	South ..	5
Sumach	93 ft. n. of Gerrard.....	Spruce.....	East	5
Sherbourne.....	Queen	Britain	West	6
Seaton Square	West side of East	Branch	West	5
Seaton Square	South side of North	Branch	South ..	5
Sinclair	Chelsea	Conduit	East	5
Sinclair	Chelsea	Conduit	West	5
Shanly	Dovercourt.....	Delaware	North ..	5
Searth	Chestnut Park.....	N. limit of lot No. 23	East	4½
Sackville	Amelia	Wellesley.....	West	5
Shaw	Queen	Argyle	West	5
Shaw	Argyle	Halton	West	5
Shanly	Westmoreland	Salem	North ..	5
Shanly	Salem	Bartlett	North ..	5
Shanly	Bartlett	Gladstone	North ..	5
Sparkhall	Broadview	381 feet east.....	South ..	5
Shaw	Queen	Arthur	East	5
Spadina.....	Division.....	100 feet north.....	East	6
Salisbury.....	195 ft. 6 in. west of Sackville	98 feet further west	South ..	3½
Shiawassie (on Island)	Lake Shore	Iroquois.....	Centre ..	5
Sumach	Wilton	Oak	East	5
Saulter	Queen	G. T. R.	West	5
Sumach	Spruce	Geneva	East	5
Sherbourne.....	Elm	454 feet south.....	West ..	6
Sumach	Queen	St. David	West ..	5
Starr	Empress Crescent.....	Dunn	N. & E. ..	5
Saulter	Queen	G. T. R.	East	5
Strange	Queen	G. T. R.	West	4
Sumach	Carlton	Geneva	East	5
Sumach	Oak	Gerrard	East	5
Sydenham	Parliament	Sackville.....	South ..	5
Seaton	Queen	Wilton	East	5
Scollard	Yonge	171 ft. west.....	North ..	5
Shaw	King	Defoe	East	5

CONCRETE SIDEWALKS—*Continued.*

Length in Feet.	Curb.		Completed.	Contractor.
	Class.	Length in Feet.		
712.4	.....	.....	Aug. 24, 1908	Crescent Con. Pav. Co.
657.0	.....	.....	May 19, 1908	Ontario Con. Pav. Co.
82.7	.....	.....	May 16, 1908	Queen City Con. Pav. Co.
200.4	5-in. concrete.	200.4	June 2, 1908	Crescent Con. Pav. Co.
155.9	"	135.7	June 15, 1908	A. Johnson.
113.0	"	128.9	June 16, 1908	G. H. Hennis.
92.0	.....	.....	June 16, 1908	Queen City Con. Pav. Co.
375.8	5-in. concrete.	43.8	July 10, 1908	Grant Contracting Co.
432.0	"	28.0	Oct. 5, 1908	Day labor, order of Council
200.0	.....	.....	May 19, 1908	A. J. Penberthy.
336.8	5-in. concrete	317.4	Aug. 12, 1908	W. R. Payne.
143.1	.....	.....	Aug. 6, 1908	Day labor.
232.0	5-in. concrete.	241.0	July 28, 1908	Crescent Con. Pav. Co.
202.1	.....	.....	July 28, 1908	" " "
622.6	.....	.....	July 6, 1908	Day labor.
620.9	.....	.....	July 7, 1908	"
286.8	.....	.....	July 4, 1908	T. E. McMurray.
734.7	.....	.....	Aug. 28, 1908	Crescent Con. Pav. Co.
318.5	.....	.....	Sept. 10, 1908	Ontario Con. Pav. Co.
969.6	5-in. concrete.	982.6	Sept. 26, 1908	Grant Contracting Co.
486.7	"	501.2	Sept. 20, 1908	" " "
323.6	.....	.....	Sept. 10, 1908	Crescent Con. Pav. Co.
308.6	.....	.....	Sept. 11, 1908	" " "
310.5	.....	.....	Sept. 12, 1908	" " "
384.8	.....	.....	Sept. 26, 1908	Queen City Con. Pav. Co.
1,843.8	.....	1,755.5	Sept. 25, 1908	Grant Contracting Co.
110.2	.....	.....	June 26, 1908	Crescent Con. Pav. Co.
98.1	5-in. concrete.	98.1	June 10, 1908	Queen City Con. Pav. Co.
656.4	.....	.....	June 9, 1908	Day labor.
439.1	5-in. concrete.	62.5	June 9, 1908	Queen City Con. Pav. Co.
812.0	.....	.....	June 15, 1908	A. J. Penberthy.
214.6	(5-in. concrete ... 27.8) (6-in. concrete ... 31.4)		June 11, 1908	Queen City Con. Pav. Co.
486.9	.....	.....	Oct. 9, 1908	Ontario Con. Pav. Co.
923.1	5-in. concrete.	953.1	Oct. 29, 1908	A. J. Penberthy.
671.0	"	668.5	Nov. 3, 1908	Day labor.
835.0	.....	.....	May 26, 1908	Queen City Con. Pav. Co.
510.0	5-in. concrete	445.5	May 12, 1908	Excelsior Con. & Pav. Co.
232.1	6-in. concrete	27.5	May 9, 1908	Enterprise Contract'g Co.
416.8	5-in. concrete.	25.5	May 11, 1908	" "
776.3	"	818.5	May 14, 1908	Leach Concrete Co.
1,394.0	.....	.....	May 30, 1908	A. J. Penberthy.
170.5	.....	.....	April 16, 1908	Day labor.
444.0	5-in. concrete.	9.5	July 7, 1908	W. R. Payne.

CONCRETE SIDEWALKS—*Continued.*

Street.	From.	To.	Side.	Width. Feet.
Spruce	Sumach	537 ft. east	North	5
Sultan	St. Thomas	West end	North	5
Sultan	St. Thomas	West end	South	5
Shaw	Queen	Defoe	East	5
Strunge	Eastern	G.T.R.	East	4
Shaw	Arthur	College	West	5
Shaw	Arthur	College	East	5
Shaw	S.s. Hallam (prod.)	Mellville	East	5
Spruce	Sumach	River	South	5
Sackville	Spruce	Carlton	West	5
Symington	Bloor	South end	West	4
Shuter	Victoria	E.s. 1st lane east	South	6
Symington	Paton Rd.	Wallace	East	5
St. Joseph	Chapel	Park	North	6
St. Patrick Sq.	Queen	Stephanie	East	5
St. Helens	Dublin	Bloor	West	4½
St. Patrick	Ryerson	Bathurst	South	6
St. Patrick	Spadina	Denison	North	5
St. Clarens	N. limit Lot 18.	Lappin	West	4
St. Clarens	Paton Rd.	Wallace	West	5
St. Andrews (on Isl'nd)	Lake Shore	Iroquois	Centre	6
Turner	Tecumseth	West end	South	4
Turner	Tecumseth	West end	North	4
Trinity	Front	King	East	5
Thomson	Munro	Davies	North	4½
Thomson	Munro	Davies	South	4½
Trinity	Front	King	West	5
Winchester	Sumach	423 ft. east	North	5
Wilton	Church	Mutual	North	5½
Wilton	Berkeley	Parliament	North	6
Wilton	Milan	Poulette	South	6
Wright	Roncesvalles	Sunnyside	North	5
Wright	Roncesvalles	Sunnyside	South	5
Walter	Roncesvalles	Sunnyside	North	5
Walter	Roncesvalles	Sunnyside	South	5
Wheeler	Queen	North City limits	East	5
Wells	Bathurst	Kendall	North	5
Wells	Brunswick	Howland	South	5
Wickson	Yonge	Oaklands	South	4½
Wellington	Bathurst	Tecumseth	North	5
Wickson	Yonge	West end	North	4½
Warren Road	Schiller	St. Clair	East	5
Warren Road	Schiller	St. Clair	West	5
Winnifred	Queen	Eastern	West	4
Wallace	Perth	Foot Bridge	North	5
Wolfrey	Bowden	Logan	South	5

CONCRETE SIDEWALKS—*Continued.*

Length, in Feet.	Curb.		Completed.		Contractor.
	Class	Length in Feet.			
647.5	5-in. concrete....	629.5	July 15, 1908	E. H. Schoales.	
172.6	".....	20.0	June 26, 1908	Crescent Con. Pav. Co.	
173.0	".....	27.0	June 25, 1908	" "	
711.0	6-in. concrete....	35.0	June 24, 1908	Grant Contracting Co.	
347.8	5-in. concrete....	347.8	June 1, 1908	Queen City Con. Pav. Co.	
1,462.5	".....	1,482.2	June 3, 1908	Crescent Con. Pav. Co.	
1,469.1	".....	1,494.7	May 27, 1908	" "	
535.3	".....	596.6	Oct. 20, 1908	Grant Contracting Co.	
612.1	".....	609.7	Nov. 4, 1908	Reeve Con. Pav. Co.	
444.2	".....	414.1	Nov. 14, 1908	A. J. Penberthy.	
889.6	".....	886.1	Nov. 10, 1908	Ontario Con. Pav. Co.	
131.0	".....	".....	Nov. 14, 1908	Day labor.	
618.0	".....	".....	Nov. 2, 1908	T. E. McMurray.	
962.1	".....	".....	Oct. 30, 1908	A. Gardner & Co.	
435.0	5-in. concrete....	443.0	July 10, 1908	Grant Contracting Co.	
1,159.0	".....	1,155.0	Oct. 13, 1908	Constructing & Pav. Co.	
499.0	".....	".....	June 24, 1908	Day labor, Order of Comm.	
1,070.3	".....	".....	June 16, 1908	J. J. Thomson.	
454.1	5-in. concrete....	454.1	May 13, 1908	Excelsior Con. & Pav. Co.	
624.5	".....	629.0	May 6, 1908	" "	
665.4	".....	".....	Sept. 30, 1908	Day labor.	
416.2	".....	".....	Oct. 24, 1908	Grant Contracting Co.	
416.3	".....	".....	Oct. 24, 1908	" "	
604.1	5-in. concrete....	625.6	June 12, 1908	Excelsior Con. & Pav. Co.	
470.2	".....	451.2	May 11, 1908	Day labor.	
430.4	".....	419.1	May 14, 1908	" "	
585.7	".....	612.1	June 20, 1908	Queen City Con. Pav. Co.	
436.0	".....	15.8	Aug. 6, 1908	Day labor, order of Council	
327.1	".....	".....	June 8, 1908	W. R. Payne.	
326.9	".....	".....	June 29, 1908	E. H. Schoales.	
309.0	".....	".....	June 5, 1908	A. J. Penberthy.	
556.6	5-in. concrete....	550.1	Sept. 23, 1908	William Bushell.	
556.5	".....	550.0	Sept. 30, 1908	" "	
569.1	".....	562.2	Sept. 29, 1908	Reeve Con. Pav. Co.	
569.2	".....	562.4	Sept. 26, 1908	" "	
199.5	".....	199.5	June 22, 1908	A. Johnson.	
1,264.4	".....	1,223.0	June 3, 1908	Day labor.	
315.0	".....	301.5	June 20, 1908	" "	
1,555.6	".....	1,560.1	June 20, 1908	" "	
655.3	".....	655.3	Oct. 19, 1908	Excelsior Con. & Pav. Co.	
1,332.0	".....	1,331.0	June 17, 1908	Day labor	
957.0	".....	".....	June 17, 1908	Leach Con. Co.	
1,006.7	".....	".....	June 17, 1908	" "	
958.4	5-in. concrete....	958.4	June 6, 1908	Queen City Con. Pav. Co.	
618.8	".....	607.0	May 29, 1908	G. H. Hennis.	
1,073.5	".....	1,073.5	May 13, 1908	Constructing & Pav. Co.	

CONCRETE SIDEWALKS - *Continued.*

Street.	From.	To.	Side.	Width Feet.
Withrow	1,046 ft. e. Broad- view.	Logan	South ..	6
Wolfrey	Broadview	Logan	North ..	5
Withrow	Broadview	Logan	North ..	5
Widmer	King	Adelaide	East	5
Waverley	Queen	120 ft. north	West	5
Wardell	S. side Cummings (prod.)	Whitby	East	4
Walnut	King	Wellington	East	4
Wellington	E.S. Stafford (prod.)	Niagara	South	6
Westmoreland	Bloor	Shanly	East	5
Yonge	Queen	Carlton	East	11½-12
Yarmouth	Manning	Clinton	North	5
Yonge	Price	Shaftesbury	East	6
Yonge	Shaftesbury	Summerhill	East	6
Yonge	Collier	Severn	East	11-12
Yonge	36 ft. n. Bismarek..	36 ft. further north	East	11
Yonge	Roxborough	Rowanwood	East	4½
Yonge	Severn	Roxborough	East	6
Yarmouth	Christie	Miles Pl	North	4½
Yonge	Walker	North City limits ..	West	6
Yorkville	640 ft. w. Yonge ..	Avenue Road	South	6
Yarmouth	Miles Pl	Shaw	North	4½
Total length in feet				
" " " " " " " " " " " "				miles

*Carried over from 1907.

**Carried over from 1906.

BRICK SIDEWALKS.

Street.	From.	To.	Side.	Width in Feet.
Chestnut Park Road	on first Island east by Chestnut Pk. Rd.	of Yonge St. made with Roxborough St.	W., N., E.	4
Roxborough east....	Yonge	100 ft. w. of w.s. Chmy (Prod.)...	North ..	4

CONCRETE SIDEWALKS—Continued.

Length Feet.	Curb.		Completed.	Contractor.
	Class.	Length in Feet.		
656.0	.....	.....	April 28, 1908	Queen City Con. Pav. Co.
2,090.5	5-in. concrete....	2,086.0	May 13, 1908	Constructing & Pav. Co.
404.9	.....	.....	April 24, 1908	Queen City Con. Pav. Co.
394.8	.....	.....	April 25, 1908	A. Johnson.
119.5	5-in. concrete....	119.5	July 10, 1908	A. Gardner & Co.
335.6	".....	310.4	Nov. 12, 1908	Queen City Con. Pav. Co.
471.1	.....	.....	Nov. 10, 1908	Day labor.
1,003.0	.....	.....	Nov. 27, 1908	Reeve Con. Pav. Co.
1,111.0	.....	.....	Nov. 13, 1908	A. Gardner & Co.
2,680.0	.....	.....	Oct. 20, 1908	"
314.0	.....	.....	July 14, 1908	W. R. Payne.
510.5	.....	.....	Sept. 3, 1908	Crescent Con. Pav. Co.
397.1	.....	.....	Sept. 3, 1908	"
347.3	.....	.....	May 22, 1908	E. H. Schoales.
36.0	.....	.....	April 16, 1908	Day labor.
468.7	.....	.....	April 23, 1908	"
1,608.5	5-in. concrete....	18.0	Aug. 10, 1908	Crescent Con. Pav. Co.
679.0	".....	1.0	May 4, 1908	Reeve Con. Pav. Co.
590.9	".....	20.8	May 31, 1908	Day labor.
280.3	.....	.....	June 30, 1908	Day labor, Order of Coun.
667.2	.....	.....	Nov. 11, 1908	W. R. Payne.
282,440.5	ft.	116,712.5		
53,492	miles.	22,104		

BRICK SIDEWALKS.

Length in Feet.	Curb.		Completed.	Contractor.
	Class.	Length in Feet.		
941.5	Nov. 2, 1908	Day labor.
722.7	Oct. 26, 1908	"
1,664.2		

TABLE No. 2.

Class of Work.	Total sq. yds. in City.	Total miles in City.	Square yards laid in 1908.	Year first laid.	Maximum grade of pavement, %	Guaranteed period of years.	Maximum cost per sq. yd. 1908. % c.	Minimum cost per sq. yd. 1908. % c.	Average cost per sq. yd. 1908. % c.	Remarks.
Asphalt	1,692,426	101.07	313,532	1888	4.73	10	2.92	1.92	2.15 ¹⁰	Heavy (prices for).
"							1.96	1.33	1.51 ¹⁰	Light (prices for).
Asphalt block	16,677	0.97	9,469	1904	3.82	10	3.85	3.37	3.67	4" bl'ks, 6" con. (prices)
Brick on concrete	337,629	22.01	16,612	1893	5.50	5	3.20	3.20	3.20	3" bl'ks, 4" con. (prices)
Brick (blk)			14,206				2.40	2.20	2.25	On 4 in. concrete.
Brick on broken stone	15,031	.842		1899		10	2.55	2.40	2.46	On 6 in. concrete.
Brick on gravel	32,009	2.218		1896		5				None laid in 1908.
†Cedar block			1,696	1881		5				"
Cedar block				1896		5				"
Gravel		24.77				5				On 6 in. concrete.
"		13.65		1880		5				None laid in 1908.
*Scoria and granite	83,880	4.847		1884		5				Including East Toronto.
Macadam		44.16				1				None laid in 1908.
Tar Macadam	86,619	5.71	12,317	1900	8.80	1				13 in. in depth.
Bitulithic	230,601	15.656	80,539	1904	10.94	10	2.25	2.25	2.25	None laid in 1908.

†(On concrete.

*Street Railway track allowance not included in total mileage.

TABLE No. 9.

GIVING MILEAGE OF CEMENT, CONCRETE AND BRICK SIDEWALKS CONSTRUCTED
IN THE CITY OF TORONTO.

Year.	Cement Concrete	Brick.	Total.
Up to 1889.....	1.190	.....	1.190
1890.....	1.426	.....	1.426
1891.....	1.950	.....	1.950
1892.....	1.508	.....	1.508
1893.....	2.259	.....	2.259
1894.....	1.137	.....	1.137
1895.....	1.918	.....	1.918
1896.....	0.612	0.204	0.816
1897.....	1.050	0.820	1.870
1898.....	2.107	1.190	3.297
1899.....	5.470	0.290	5.760
1900.....	15.227	0.038	15.265
1901.....	17.305	0.511	17.816
1902.....	27.360	0.049	27.409
1903.....	34.896	0.093	34.989
1904.....	31.058	0.001	31.059
1905.....	37.500	0.037	37.537
1906.....	43.536	0.131	43.666
1907.....	58.309	.....	58.309
1908.....	55.101	0.303	55.404
Totals	340.919	3.666	344.585

TABLE No. 10.
CONCRETE WALKS CONSTRUCTED BY DAY LABOR, 1908.

Street.	Side.	From.	To.	Width in Feet.	Description.	Length in Feet.
Albert	S	Elizabeth	Chestnut	6	Pres. position	182.2
Albert	N	James	Chestnut	6	Pres. position	827.6
Augusta	W	Denison	Bellevue	5	Next curb....	168.
Alma	S	Gladstone	Dufferin	4 ¹ / ₂	With curb....	371.1
Broadview.....	W	29 ft. n. Gerrard	971 ft. further n.	6	Pres. position	1,010.
Bloor.....	S	St. Clarens	Brock	5	Pres. position	556.
Balmoral	N	Avenue Rd.....	Popl'r Plains Rd	5	Next curb....	608.
Bathurst	E	Farley	Adelaide	6	Next curb....	447.
Beatrice	W	922 ft. n. of n.e. cor. College.	57 ft. further n.	4 ¹ / ₂	With curb....	56.9
Crocker.....	N	Bellwoods	East end	4	With curb....	433.9
Constance.....	N	Roncesvalles	Sunnyside	5	With curb....	572.
Constance.....	S	Roncesvalles	Sunnyside	5	With curb....	572.3
Chestnut	W	Elm	136 ft. south ..	5	Next curb....	139.4
College	S	Huron	368 ft. west ..	6	Pres. position	290.4
Clinton	W	Bloor	320 ft. north ..	5	Next curb....	408.
Crescent Rd.....	S	Park Rd	Searth Rd	4	Next curb....	217.3
Dupont	N	Howland	Kendal	5	Next curb....	634.9
Dufferin	W	Bloor	S. limit of Sch'l Property.	5	With curb	416.
Dagmar.....	S	275 ft. e. Pape.	Brooklyn	5	Next curb....	175.8
Davenport	N	Bedford	635 ft. w. of Avenue Rd.	5	Next curb ..	189.5
Davies	E	Queen	Matilda	4	Next curb....	613.
Elizabeth	E	1st lane n. College.	Grenville	5	Pres. position	116.
Front	S	Trinity	Cherry	5	Next curb....	599.6
Front	N	Princess	Sherbourne	5	Next curb....	274.8
First	S	Bolton	DeGrassi	5	Next curb....	218.
Foxbar	N & W	Avenue Rd.....	St. Clair	5	With curb....	1,258.8
Gerrard.....	N	Parliament	Sackville.....	6	Pres. position	783.3
Hallam	S	Dovercourt	Delaware.....	5	Next curb....	286.
Troquois	S	Manitou	St. Andrews....	6	Cent. of street	1,730.8
James	W	Queen	Albert	6	With curb....	339.6
King	S	Dufferin	Mowat.....	6	Next curb....	320.
King	S	Spadina	Bathurst	6	Pres. position	1,732.1
Leslie	W	Gerrard	Harriett	5	With curb....	736.3
Lynd	W	College	Neepawa	5	With curb....	411.
Lindsay	N	Havelock	Gladstone	5	Next curb....	384.2
Lindsay	S	Havelock	Gladstone	5	Next curb....	406.
Montrose	W	Sully Cres	Cinder.....	5	With curb	262.3

TABLE No. 10.

CONCRETE WALKS CONSTRUCTED BY DAY LABOR, 1908.

City's Tender.	Length in miles on a basis of 5 ft. wide.	Next lowest Tender, per lineal feet.	Actual cost of Work included in Tender.	Cost of Work not included in Tender.	Cost of Work included in Tender.	Total cost of Work, exclusive of interest on money.	The difference between contract cost and cost based on Contractor's lowest Tender.	
							Gain.	Loss.
\$ c.		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
70	.0414	78	.94	4 35	171 69	176 04	.....	29 58
81	.188	87	.695	53 39	575 31	628 70	144 70	.....
O. of C.	.0318	.....	.789	12 50	132 59	135 09	.....	.....
1 10	.063	.....	.884	22 67	328 15	350 82	80 06	.....
O. of C.	.2295	.....	.811	57 08	763 51	820 59	.....	.....
O. of C.	.1053	.....	.599	13 04	333 38	346 42	.....	.....
75	.1151	77	.820	34 04	498 74	464 70	.....	29 68
85	.1082	96	.765	45 85	342 38	388 13	60 02	.....
O. of C.	.0108	.....	1.030	79	58 64	59 43	.....	.....
52	.0657	.555	.609	21 49	264 26	285 75	.....	23 45
1 10	.1081	1 16	.898	23 70	513 72	537 42	149 82	.....
1 10	.1083	1 16	.859	23 61	492 06	515 67	169 81	.....
.665	.0264	.785	.770	2 33	107 43	109 76	4 09	.....
78	.066	.....	.724	15 31	210 42	229 73	16 09	.....
1 20	.0772	1 24	.728	13 26	297 59	310 85	208 33	.....
48	.0329	55	.565	21 65	122 88	144 53	.....	3 37
73	.1202	75	.813	28 68	515 80	544 48	.....	39 62
O. of C.	.0787	.....	.985	11 09	409 80	429 89	.....	.....
65	.0332	.675	.68	4 70	119 68	124 58	.....	1 01
65	.036	65	.865	11 35	163 90	175 25	.....	40 72
65	.0928	70	.692	19 57	424 46	444 03	4 61	.....
62	.0219	65	.742	7 57	86 04	93 61	.....	16 64
65	.1135	.659	.543	17 82	325 72	343 54	69 42	.....
65	.0632	.659	.626	13 22	172 09	185 31	9 00	.....
65	.0412	68	.708	2 93	154 42	157 35	.....	26 18
O. of C.	.2383	.....	1.181	101 42	1,486 83	1,588 25	.....	.....
86	.1784	96	.697	36 74	547 71	584 45	206 18	.....
1 17	.0541	1 15	.916	4 29	262 09	266 38	66 81	.....
90	.3278	1 00	.646	56 77	1,117 77	1,061 90	613 05	.....
O. of C.	.077	.....	1.51	34 26	513 15	547 41	.....	.....
O. of C.	.0727	.....	.803	5 00	256 10	261 10	.....	.....
88	.3936	92	.723	88 11	1,253 40	1,341 51	340 11	.....
1 07	.1394	.908	.959	56 96	706 57	763 53	161 99	.....
O. of C.	.1005	.....	.74	76 98	303 87	380 85	.....	.....
75	.0727	79	.716	15 44	274 70	290 14	28 82	.....
75	.0768	79	.74	11 06	290 63	301 69	20 30	.....
1 19	.0527	1 25	1.05	41 79	276 35	318 14	51 52	.....

TABLE No. 10—*Continued.*
CONCRETE WALKS CONSTRUCTED BY DAY LABOR, 1908.

Street.	Side.	From.	To.	Width in Feet.	Description.	Length in Feet.
Marmaduke	N	Roncesvalles ..	Sunnyside	5	With curb	570.8
Marmaduke	S	Roncesvalles ..	Sunnyside	5	With curb	570.0
Manning	E	Robinson	Arthur	5	With curb	1,274.7
Manning	W	Robinson	Arthur	5	With curb	1,327.6
Mercer	N	John	Peter	5	Next curb	660.2
Napier	N	Munro	West end	4	Next curb	334.5
Napier	S	Munro	West end	4	Next curb	334.5
Oxford	N	Bellevue	Lippincott	5	With curb	502.
Oxford	S	Bellevue	Angusta	5	With curb	316.1
Oriole	W	Heath	Lonsdale	5	With curb	684.3
Ongiara	C	Lake Shore	Iroquois	5	Cent. of street	649.7
Queen	S	50 ft. e. Dover- court.	93 ft. fur. east.	10	Next curb	92.8
Radenhurst	N	River	Defries	4	With curb	281.3
Robinson	S	Bathurst	Markham	5	Next curb	268.5
Robinson	S	Palmerston	Markham	5	Next curb	261.9
Russett	W	762 ft. n. Bloor	987 ft. n. Bloor	4	Next curb	224.
Roncesvalles	E	Queen	430 ft. north ..	5	2 ft. from S.L.	430.
Sherbourne	W	Britain	Queen	6	Pres. position	143.1
Scollard	N	Yonge	171 ft. west	5	Pres. position	170.5
Shiawassi	C	Lake front	Iroquois	5	Cent. of street	656.4
Starr	N & E	Dunn	Empress Cres..	5	With curb	671.
St. Andrews	C	Lake Shore	Iroquois	6	Cent. of street	665.4
Shuter	S	Victoria	1st lane east ..	6	Next curb	131.
Sinclair	E	Conduit	Chelsea	5	Next curb	622.6
Sinclair	W	Conduit	Chelsea	5	Next curb	620.9
St. Patrick	S	Bathurst	Ryerson	6	Next curb	499.
Thomson	N	Munro	Davies	4 $\frac{1}{2}$	With curb	451.2
Thomson	S	Munro	Davies	4 $\frac{1}{2}$	With curb	411.3
Walnut	E	King	Wellington	4	Pres. position	471.1
Wickson	N	Yonge	West end	4 $\frac{1}{2}$	With curb	1,331.
Wickson	S	Yonge	Oaklands	4 $\frac{1}{2}$	With curb	1,555.6
Winchester	N	Sumach	423 ft. east	5	Pres. position	436.
Wells	S	Brunswick	Howland	5	With curb	315.
Wells	N	Bathurst	Kendal	5	With curb	1,257.7
Yonge	E	36 ft. n. of Bis- marek	36 ft. fur. north	11	Next curb	36.
Yonge	E	Roxboro	Rowanwood ..	4 $\frac{1}{2}$	Pres. position	468.7
Yonge	W	Walker	N. City limits ..	6	Pres. position	590.9
Yorkville	S	640 ft. w. Yonge	Avenue Road ..	6	Pres. position	280.3
						7 $\frac{1}{2}$ miles

TABLE No. 10--*Continued.*
BRICK WALKS CONSTRUCTED BY DAY LABOR, 1908.

Street.	Side.	From.	To.	Width in Feet.	Description.	Length in Feet.
Chestnut Pk. Rd.	N W					
	& E	Sides of 1st island	e. of Yonge.	4	2 ft. from S.L.	914.
Roxborough. . .	N	Yonge	100 ft. w. Cluny	4	2 ft. from S.L.	705.7

TABLE No. 10—*Continued.*

BRICK WALKS CONSTRUCTED BY DAY LABOR, 1908.

City's Tender, per lineal foot.	Length in miles on a basis of 5 ft. wide.	Next lowest Ten- der, per lineal foot.	Actual cost of Work included in Ten- der.	Cost of Work not included in Ten- der.	Cost of Work in- cluded in Tender.	Total cost of Work, exclusive of in- terest on money.	The difference between con- tract cost and cost based on Contractor's lowest Tender.	
							Gain.	Loss.
\$ c.		\$ c.	cts.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
70708	44 46	647 58	692 04	.....	7 78
7072	38 85	597 39	546 24	.....	13 40
				2,061 50	32,390 92	34,452 42	4,848 60	324 53

TABLE No. 11.

PAVEMENTS.

No.	Street.	From.	To.	Class of Pavement.	Width in Feet.	Length in Feet.
1	Bloor, T. A.	Lansdowne . .	Dufferin	Granite, T. A. .	16.5	1,956
2	Barton	Bathurst	Markham	Asphalt.	24	266.3
3	Barton	Palmerston . .	Manning	"	24	530
4	Balsam	Spadina	Charlotte	Vitrified block	18.9	292
5	Brunswick, e.s.	College	120 ft. north.	Asphalt.	16.8	110
6	Colborne	Church.	West Market	Asphalt block . .	25.7	420.2
7	Cluny	Roxborough . .	Crescent Rd.	Macadam.	21	282.3
8	West Don Esplanade.	Queen	Mark.	Vitrified block	28	1,157
9	Euclid	Arthur	College.	Asphalt.	24	1,500
10	Eastern.	Carlaw.	Morse	"	24	278
11	Esplanade. . . .	Yonge	Scott, w.s. . . .	Cedar block. . . .	40-50.2	330
12	Frederick. . . .	Front	King.	Vitrified block	14	267
13	Franklin	Ruskin.	North end. . . .	Asphalt.	24	1,609
14	Gladstone	College.	Lindsay.	Light Asphalt. . .	24	332
15	Gore.	Clinton	West end. . . .	"	21	296.7
16	Grace.	Bloor.	530 ft. south.	Grading.	24	530
17	Harbor.	Yonge	Bay	Vitrified block	42	503
18	Huntley.	Bridge	Elm	Macadam.	24	350.3
19	James	Queen	Albert.	Asphalt.	10.3	380
20	Keele	Howard Park	Bloor	Grading.	40	2,186
21	Lane 1st n. of Front	Church	West Market	Vitrified block	14	421
22	Lane 1st s. of King.	Church.	West Market	" "	15.2-20	441
23	Lane 1st s. of Queen	Peter.	West end. . . .	Concrete.	14	270
24	Lane 1st s. of Queen	Esther	McDougall's. . .	"	10	373
25	Lane 1st s. of Queen	Church.	East end. . . .	Vitrified block	12	440
26	Lane bet. Elm and Edward.	Centre	Chestnut.	Brick.	12.8	240
27	Lane 1st n. of Front	Spadina	East end. . . .	Vitrified block	14	383
28	Ontario.	Queen	Duke.	Asphalt.	24	765
29	Perth.	Bloor.	South end. . . .	"	24	871
30	Parliament	Wellesley, s.s.	45 ft. n. of s.s. of Howard. . . .	"	24	1,287
31	Parliament	Winchester. . .	Wellesley. . . .	"	26	810
32	Pinchill.	Rosedale Rd.	West end. . . .	Macadam.	18	298

TABLE No. 11.

PAVEMENTS.

City's Tender.	Next Lowest.	Cost of work not included in Ten- der.	Actual cost of work included in Ten- der.	Total cost of work exclusive of in- terest on money.	Total cost of work based on Con- tractor's next lowest Tender.	Difference between actual cost and cost based on Con- tractor's next lowest Tender.	
						Gain.	Loss.
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Order of Council.			13,085 00	13,085 00			
1,141 00	1,150 00	13 35	969 75	983 10	1,163 35	180 25	
2,540 00	2,630 00	34 10	1,963 72	1,997 82	2,664 10	666 28	
1,350 00	1,465 00	28 63	1,400 00	1,428 63	1,493 63	65 00	
349 00	350 00	5 74	307 62	313 36	355 74	42 38	
4,341 00	4,579 00	215 22	3,574 14	3,819 36	4,824 22	804 86	
Order of Council.		55 23	998 47	1,353 70			
9,567 00	10,285 00	681 46	8,412 00	9,093 46	11,066 46	1,873 00	
6,490 00	6,525 00	189 16	5,723 34	5,912 50	6,714 16	801 66	
1,330 00	1,379 00	79 48	1,229 00	1,308 48	1,458 48	150 00	
Order of Council.		64 64	3,740 89	3,805 53			
2,344 00	2,442 00	64 02	2,077 30	2,141 32	2,506 02	364 70	
6,979 00	7,280 00	145 16	5,530 05	5,675 21	7,425 16	1,749 95	
1,437 00	1,497 00	62 08	1,073 83	1,135 91	1,559 08	423 17	
1,263 00	1,359 00	79 85	1,019 29	1,099 14	1,438 85	339 71	
Order of Council.		22 48	1,544 76	1,567 24			
6,207 00	6,238 00	195 42	6,008 16	5,812 74	6,042 58	229 84	
1,578 00	1,721 00	17 83	1,337 11	1,354 94	1,738 83	383 89	
1,082 00	1,246 00	204 94	1,172 76	1,327 70	1,450 94	123 24	
4,000 00	4,350 00	1,397 91	2,871 14	4,269 05	5,747 91	1,478 86	
1,880 00	1,902 00	213 35	1,547 93	1,761 28	2,115 35	354 07	
1,838 00		249 09	1,715 11	1,964 20		122 89	
671 00	728 00	25 66	776 18	801 84	753 66		48 18
861 00	898 00	36 98	867 00	903 98	934 98	31 00	
1,862 00	1,889 00	63 16	1,383 03	1,446 19	1,952 16	505 97	
960 00		136 93	1,095 86	1,232 79			35 86
1,400 00	3,064 00	298 59	1,335 13	1,633 72	3,362 59	1,728 87	
3,016 00	3,268 00	144 72	2,281 69	2,426 41	3,412 72	986 31	
3,964 00	4,058 00	56 90	3,375 35	3,432 25	4,104 90	682 65	
5,944 00	5,995 00	190 37	4,395 00	4,585 37	6,185 37	1,600 00	
5,767 00	5,689 00	248 28	4,340 29	4,588 57	5,937 28	1,426 71	
Order of Council.							
883 00	892 00	11 89	783 08	794 97	903 89	198 92	

TABLE No. 11.
PAVEMENTS—*Continued.*

No.	Street.	From.	To.	Class of Pavement.	Width in Feet.	Length in Feet.
33	Parkview.....	175 ft. n. of Wellesley	63 ft. fur. n.	Macadam	24	63
34	Parliament	King.....	Mill, s.s.....	Vitrified block	32	960
35	River.....	King.....	Queen	" "	24	129
36	Sinclair.....	Conduit	Chelsea	Asphalt.	24	598.5
37	Shanly.....	Salem.....	Dufferin.....	" "	24-25	837
38	Sackville.....	King.....	Eastern	Asphalt block .	24	385.6
39	Sherbourne.....	Front.	King.....	Vitrified block	18	273
40	Scollard.....	480 ft. w. of Yonge	Hazelton....	Asphalt.	21	998.4
41	Scollard.	Yonge.....	480 ft. w. of Yonge	" "	23	480
42	Sultan	St. Thomas..	West end. . . .	" "	24	.....
43	Van Horne.....	Ossington. . .	Dovercourt .	" "	24	915
44	West Market . .	King.....	Front.....	Asphalt block .	44	360
45	Wascana	Sumach	East end.....	Brick.	18	295.7
46	Winchester.....	Sumach	Danforth....	Macadam re-construction.	24-30	4,140
					Miles.	40,340.7 5 $\frac{1}{4}$

TABLE No. 11.
PAVEMENTS—Continued.

City's Tender.	Next Lowest.	Cost of work not included in Ten- der.	Actual cost of work included in Ten- der.	Total cost of work exclusive of in- terest on money.	Total cost of work based on Con- tractors' next lowest Tender.	Difference between actual cost and cost based on Con- tractor's next lowest Tender.	
						Gain.	Loss.
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
327 00	1,127 00	1 65	244 16	245 81	1,128 65	882 84	.....
8,372 00	8,647 00	154 66	7,665 81	7,820 47	8,801 66	981 19	.....
771 00	773 81	11 49	755 98	767 47	785 30	17 83	.....
2,988 00	3,117 00	200 58	2,216 23	2,416 81	3,317 58	900 77	.....
3,572 00	3,589 00	149 59	2,590 15	2,739 74	3,738 59	998 25	.....
3,450 00	3,590 00	59 67	3,078 58	3,138 25	3,649 67	511 42	.....
2,242 00	2,355 00	92 18	2,164 71	2,256 89	2,447 18	190 29	.....
4,318 00	4,396 00	328 47	3,267 85	3,595 92	4,624 07	1,128 15	.....
2,474 00	2,709 00	188 80	2,257 38	2,446 18	2,897 09	451 62	.....
961 00	1,046 60	12 42	791 31	803 73	1,058 42	254 69	.....
5,010 00	5,038 00	83 60	3,921 91	4,005 51	5,121 60	1,116 09	.....
6,230 00	.....	127 11	5,531 10	5,658 21	.....	698 90	.....
1,338 00	1,348 00	99 46	1,239 98	1,339 44	1,447 46	108 02	.....
Order of Council.		50 00	14,374 65	4,424 65	.....	.....	.....
		6,431 06	127,983 78	134,414 84		25,464 84	84 04
					Net Gain.	25,380 80	

TABLE No. 12.

WORKS CONSTRUCTED AS LOCAL IMPROVEMENTS FROM 1892 TO 1908 (INCLUSIVE).

Class of Work.	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
Asphalt	9	7	7	4	3	4	14	28	27	25	24	26	33	30	39	76	106
Asphalt Block													1	1	1	4	6
Bitulithic													4	9	18	28	26
Brick				2	6	16	13	23	13	7	11	10	12	8	8	8	11
Gravel Roadways						16		1	1								
Cobble Stone Pavem'ts	5								1								
Stone Setts										1		1		1		1	
Macadam Roadways ..	1		1	4	5	3	13	24	14	16	24	14	14	12	4	6	5
Tar Macadam Pavem'ts									1	1	6	12	8	9	2	2	
Cedar Block Pavements	20	14	6	7	3	7	19	20	24	12	10	6	3	6	3	1	1
Concrete Pavements...				3			1				1	2	1	2	2	6	8
Scoria Block	1																
Concrete & Stone Curb										1	3	4	6	15	23	42	93
Wood Curb										3	1	1					
Concrete Walks	6	3	6	11	6	13	25	37	85	118	188	236	247	276	359	428	430
Brick Walks					1	8	14	4	1	2	1		1	1	1		2
Stone Flag Walks ...	1	1															
Grading.....													2	2	1	2	6
Wood Block.....														2		4	
Vitrified Block														3	2	13	13
	43	25	20	31	24	67	99	137	167	186	269	312	332	377	463	621	707

TABLE 14.
CONCRETE CURBS.

Street.	Side.	From.	To.	Length.	Cost per Foot.	Actual Cost.	Extras	Total Cost.	Gain.
					c/	%	c/	%	%
Balsam	N	Spadina	Charlotte	291	42	122 22		122 22	.....
Foxbar	S. E.	Avenue Rd.	St. Clair	1,301	48 ³ / ₄	633 17	7 15	640 32	.....
Franklin	E.	Ruskin	N. end.	1,687.9	32	540 13		540 13	.....
"	W.	Ruskin	Royce	998.8	32	319 61		319 61	.....
"	W.	Edith	N. end.	416.4	32	133 25		133 25	.....
Langley	N	Broadview	Logan	1,934.7	39 ⁸ / ₁₀	757 22	10 56	767 78	55 35
"	N	"	"	1,933.0	40 ¹ / ₂	774 78	12 01	786 79	34 08
Manning	E.	"	Arthur	1,299.4	42	538 37		538 37	.....
"	E.	Robinson	"	1,319.8	42	559 50		559 50	.....
"	W.	"	"	444.5	32	132 64		132 64	.....
Ontario	E.	Duke	Duchess	767.4	32	245 57		245 57	.....
Parliament	E.	Winchester	Wellesley	576	32	120 32		120 32	.....
"	W.	Prospect	"	555.1	32	177 63		177 63	.....
Shanley	S.	Salem	Hamburg	835	32	266 59		266 59	.....
"	N	"	Dufferin	1,476	39	574 93	9 17	584 10	44 99
Tyndall	E.	King	Springhurst	1,478.7	37 ¹ / ₂	554 84	8 14	562 98	66 21
"	W.	"	"						
				Feet 17,142.7		6,453 77	47 03	6,500 80	290 63
				Miles 34					

Repairs and Maintenance of Bridges, Wharves, Etc., 1908.

CITY ENGINEER'S DEPARTMENT,
Toronto, December 31st, 1908.

MR. C. H. RUST,
City Engineer:

DEAR SIR,—Herewith I submit a statement of work done during the past year.

LAMB'S BRIDGE.

Slight repairs only were done to the deck and handrailing of this bridge. The turning gear cleaned and adjusted.

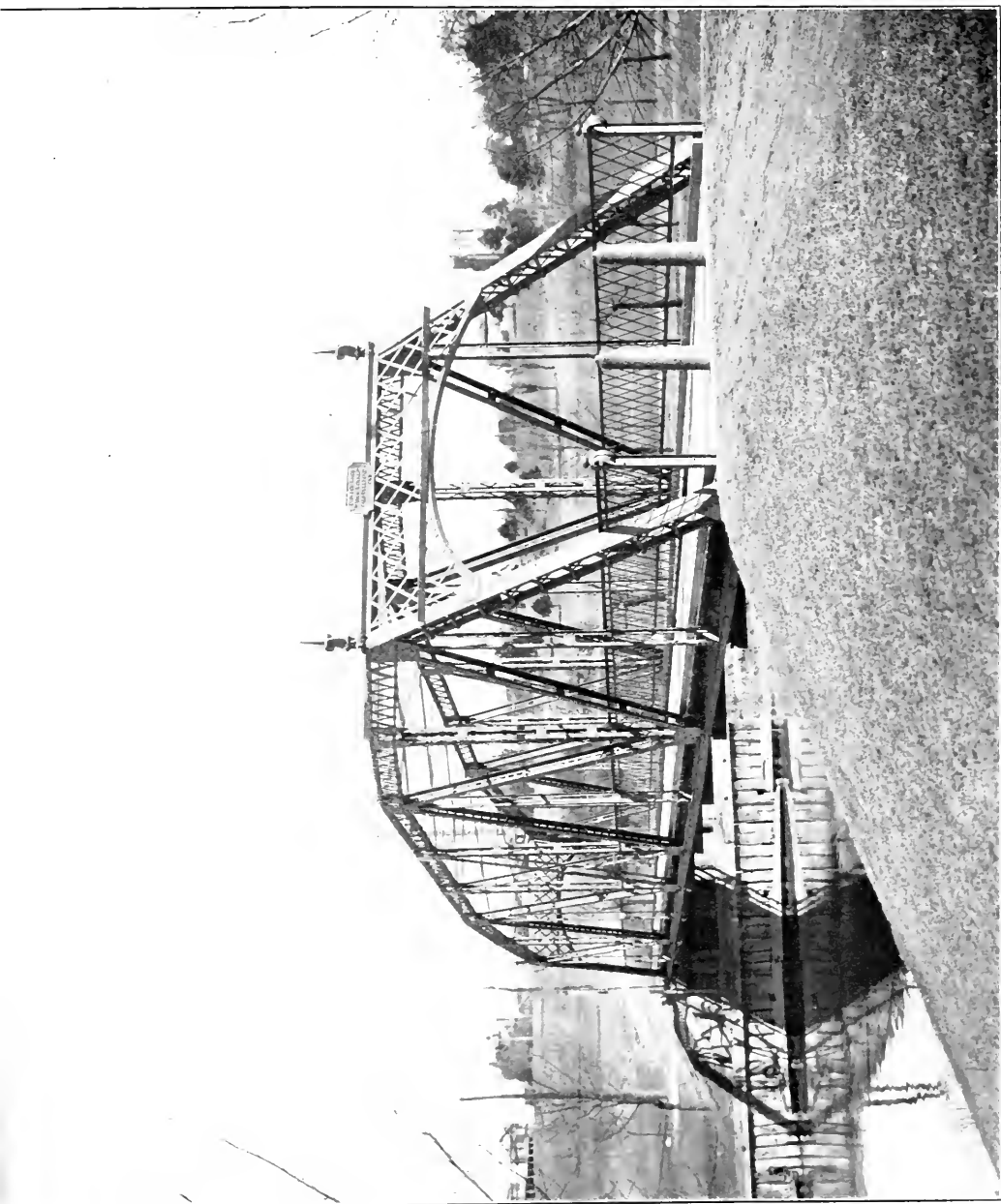
The caretaker in charge of this bridge was on duty from April 22nd to December 24th, being nearly two months longer than in the previous year, owing to the open season. The bridge was kept in a clean and efficient working order during this time.

CHERRY STREET BRIDGE.

One new wearing course was put on and the operating gear adjusted so that the bridge could be opened during the first freshets for the passage of ice. The centre pier and abutments are constantly altering in position from settlement, so that the bridge could not be opened without some considerable adjustment. As small an amount as possible is being spent on this bridge so as to keep it safe.

RIVERDALE PARK FOOT BRIDGE.

A new steel bridge has been erected at this place, in one clear span of 120 ft. The present wood piling abutments were used, and will be replaced by concrete when required. The contractors were the Dickson Bros., of Campbellford, Ontario. The contract price was \$3,421, and \$133.84 was spent for altering the abutments and placing barriers to prevent vehicular traffic.



RIVERDALE PARK FOOT BRIDGE



POPLAR PLAINS ROAD BRIDGE OR CULVERT.

The old structure of rough masonry and wood, which only occupied part of the roadway, was entirely removed and a new structure with concrete abutments and deck of steel beams, expanded metal and concrete has been erected occupying the entire width of the travelled road, and sidewalks; neat, substantial steel railings were erected on concrete parapets at each side. This was built by day labor and cost \$1,138.71.

CRAWFORD STREET BRIDGE.

This bridge was found to be in a dangerous state. The entire top portion of it down to 5 or 6 feet below the surface had to be removed and a new surface and handrailing constructed. There was about 2 feet of rise in the centre of the bridge. This was taken out and the deck laid to an even grade from the asphalt pavement at the south end to the block paving on Arthur Street, at the north end. The bents were repaired and new bracing put in; the undersills also were taken up and renewed where necessary.

GLEN ROAD BRIDGE.

Both the wearing course and the under-planking of this bridge were removed and renewed; new sidewalks also were put on.

HUNTLEY STREET BRIDGE.

The entire deck, both planking and joists, also sidewalks, were renewed.

SHERBOURNE STREET BRIDGE.

Some repairs to hand-railing only were done here.

DUNDAS STREET BRIDGES.

The deck of this bridge is in a very poor condition, and requires constant attention, and should be entirely renewed. This is an opportune time to consider widening these bridges to the full width of the street. Traffic is constantly increasing and is very much congested at the present time. An estimate has been submitted with this end in view.

STRACHAN AVENUE BRIDGES.

Some general repairs to decks and bents only.

WINCHESTER STREET BRIDGE.

This bridge has been repaired and strengthened to carry it over the winter, but it must be replaced by a steel bridge or entirely rebuilt in the coming season.

GERRARD STREET BRIDGE.

The only repairs done to this bridge were to the hand-railing. It will require an entirely new wearing course in the coming season.

QUEEN STREET SUBWAY.

The galvanized iron shelter roof over the sidewalks was found to be sagging, being overloaded with rubbish and cinders from the railway. It was unloaded, straightened and repaired.

DUPONT STREET CULVERT.

The walls of this culvert were strengthened by new horizontal stays, and a new wearing course put on deck.

HUMBER RIVER BRIDGE.

No repairs were needed on this bridge; it will require new wearing course and re-painting during the coming season.

EASTERN AVENUE BRIDGE.

This bridge is in fair condition, but will require some considerable repairs and re-painting.

QUEEN STREET BRIDGE.

This bridge badly needs re-painting, otherwise it is in very good condition.

NORTH GLEN ROAD BRIDGE.

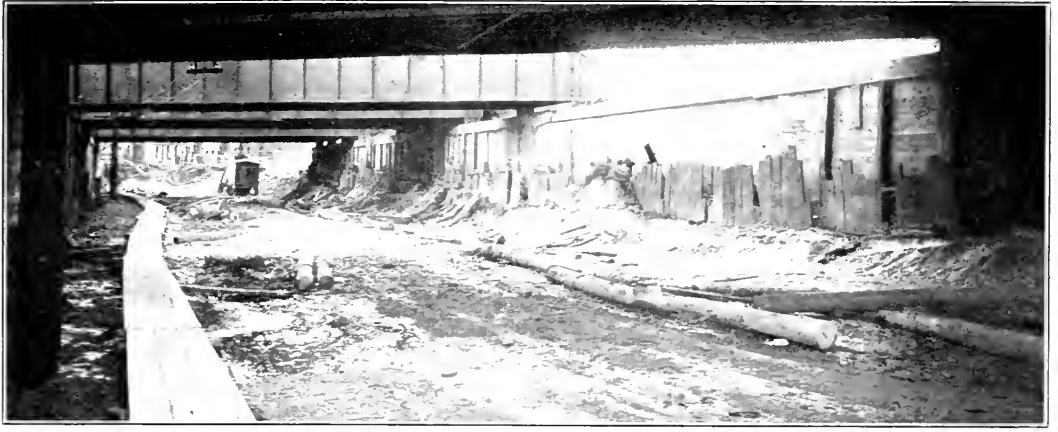
Some repairs and renewals are required to the deck planking, the several diagonal bracing-rods require tightening, otherwise the bridge is in good condition.

SUMMERHILL AVENUE BRIDGE.

This bridge is in fairly good condition, but will require some considerable repairs.

BINSARTH AVENUE BRIDGE.

This bridge is very much decayed, and will require attention during the coming season.



LOOKING SOUTH IN SUBWAY



GENERAL VIEW LANSDOWNE AVE. SUBWAY



CASTLE FRANK AVENUE BRIDGE.

This bridge was entirely removed.

WALLACE AVENUE FOOTBRIDGE.

This bridge is in first-class condition, and will only require some slight repairs in the coming season.

LANDSDOWNE AVENUE SUBWAY.

The steel work for this subway began to arrive on the ground on the 1st of August, and as fast as it arrived was erected by the contractors' foreman. All the G. T. R. portion of the work was erected and in running order before the end of the year. The contractor for the substructure is digging out the main core of earth.

DOCKS AND WHARVES.

Yonge Street Wharf.—A little repairs only have been done to this wharf, only sufficient to prevent accidents, but to the approaches thereto and the roadway alongside very considerable work has been done, and on that part of roadway near Lake Street.

BAY STREET WHARF.

Some general repairs only were done here, and to the approaching sidewalks. The south and west sides are showing much depression on account of the heavy loading, especially of gravel on the south side.

FERRY WHARF.

On account of the prevailing high water during the summer months, the sides had to be raised for a considerable distance, by 10-in. x 10-in. wood curbing, and the slips of access to boats altered and raised. New flooring was put on approaches to same.

BROCK STREET WHARF.

Some general repairs only to deck planking and curbs.

DUFFERIN STREET DUMP.

A man is kept here most of the year to check teams arriving and to spread the earth.

ISLAND BRIDGES AND WHARVES.

Turner's Baths Bridge.—Some repairs and straightening were done here, so as to make it passable, but nothing more can be done; the bridge is only a heap of rottenness.

MANITOU AVENUE WHARF.

This wharf was lowered into proper position and had some needed repairs.

WHARF AT SICK CHILDREN'S HOSPITAL.

This wharf had been considerably raised by the frost. It was lowered to somewhere near its old position and repaired.

WHARF AT WARD'S ISLAND.

The curb on this wharf had to be raised on account of high water.

CLANDEBOYE AVENUE BRIDGE.

This bridge, which was removed to allow the City Dredge to operate south, has been put back into its old position and temporarily repaired. It is the intention to replace it in the coming season by a movable structure of some kind.

ISLAND PARK WHARF.

The east wharf must be stripped, the piles re-driven, re-planked, and the north end sheeted.

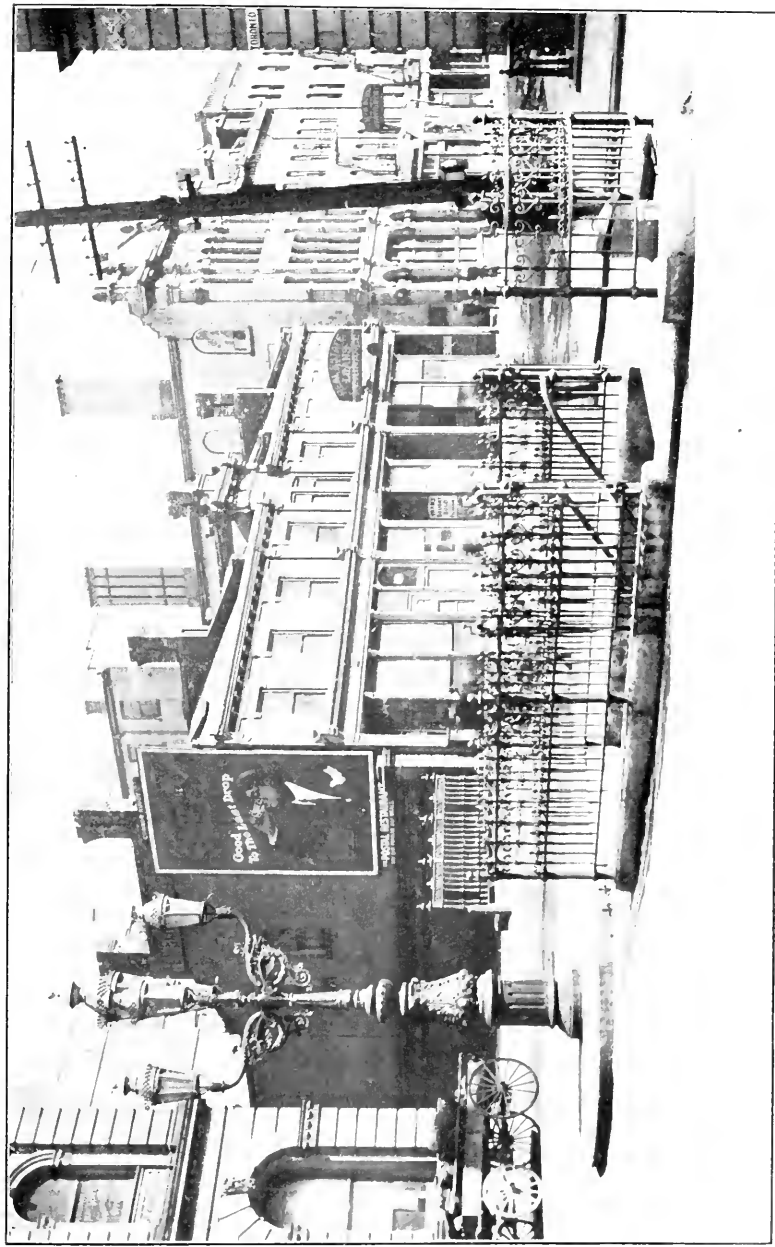
PUBLIC CONVENIENCES.

The two new lavatories at Yonge and Cottingham Streets, and at Queen Street and Spadina Avenue, have been kept in a clean and efficient manner during the year.

The Cottingham Street lavatory has been enlarged by the addition of a lavatory for women at its west end. The gas heater has been removed and a coal heater substituted so as to heat both lavatories, and placed in charge of the men's caretaker.

The lavatory at Adelaide and Toronto Streets has been thoroughly refitted, the access to same made more convenient; a neat hand-railing protects the stairway, and an ornamental lamp replaces the unsightly corrugated entrance.

The number of persons using these conveniences goes to show the great necessity of a number of these being installed in other parts of the City. The number using the convenience at Yonge and Cottingham Streets was 97,913; at Queen and Spadina, 579,085, and at Adelaide and Toronto Streets, 203,965, to which must be added the women's lavatory 2,511, making a total of 883,534 persons. This total is a



TORONTO ST. LAVATORY, NEW ENTRANCE



little less than last year, owing to the lavatory at Toronto Street being closed for twelve weeks. The daily average for the year being 2,147. The largest attendance during one week occurred at Queen and Spadina on week ending December 20th, when 12,894 persons used this lavatory; at Adelaide and Toronto Streets, week ending April 4th, 6,321, and at Yonge and Cottingham Streets, on week ending September 6th, 2,490.

The contractor for the work of building the women's lavatory at Cottingham Street and refitting the one at Toronto Street was Mr. Harry Jennings, the contract price being \$5,243, with extras for installing new heating apparatus, totalling \$5,377.50. There must be added to this a sum of about \$550 for lamp, repairs to same, diverting gas main and electric light conduit, and wiring and fitting lavatory and lamp with electric lighting.

Respectfully submitted,

JOHN WILLIAMS,

Assistant Engineer.

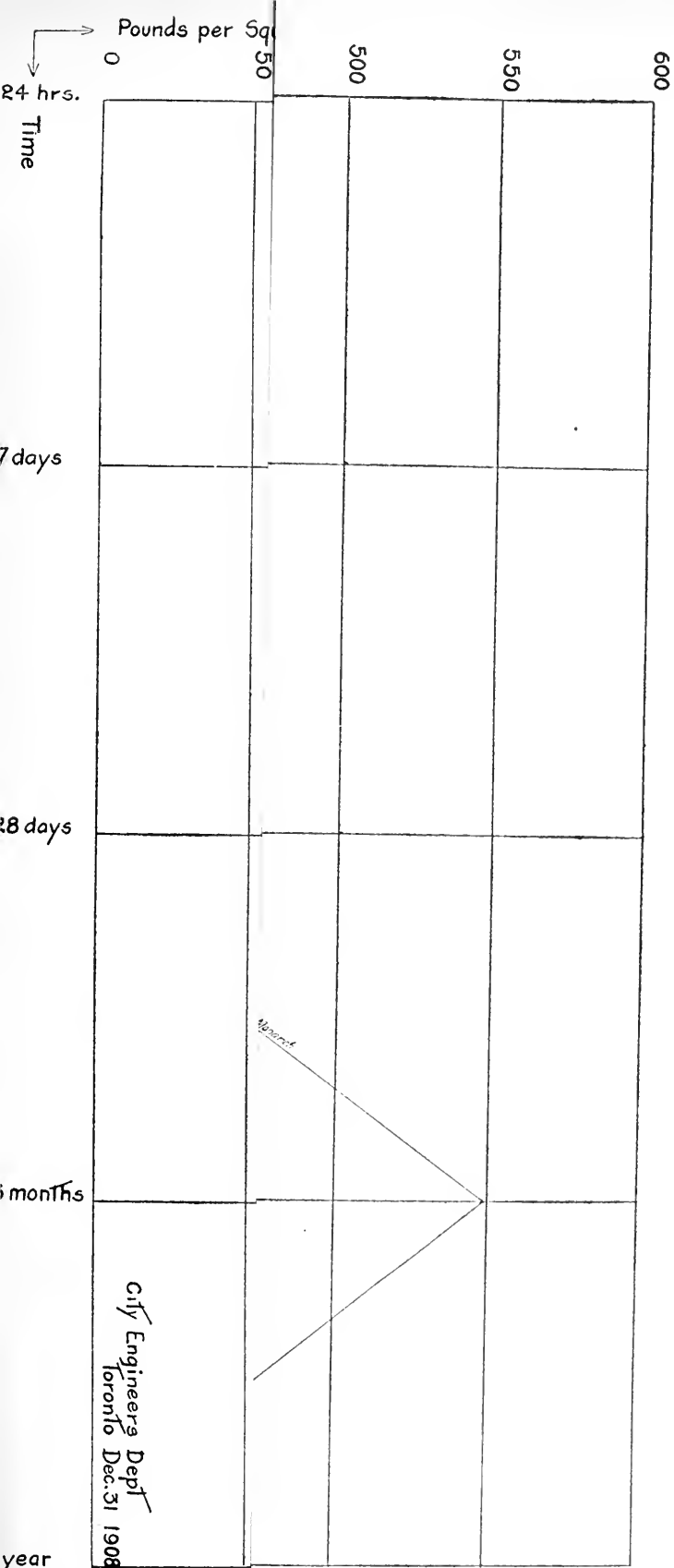
DETAILS OF COST DURING 1908.

Bridges, etc.	Nails and Iron- work.	Tools.	Paint.	Sundries	Lumber.	Labor.	Total.
	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.	\$ c.
Lamb's & Cherry St. Bridges				13 92	138 79	737 70	890 41
Rivendale Pk. Bridge	5 58	Insp'n		162 20		133 84	301 62
Lansdowne Subway..	70 89	975 60			69 93	66 00	1,182 42
Bridge Tools				57 27		82 30	139 57
Crawford St. Bridge	105 16	6 32		50 02	3,044 52	1,585 97	4,791 99
Glen Rd. "	35 48				919 83	558 70	1,514 01
Huntley St. "	51 14			3 58	2,314 24	728 30	3,097 26
Sherbourne St. "						12 00	12 00
Dundas St. Bridges				5 02	359 87	376 80	731 69
Strachan Ave. "				7 14	34 47	275 09	316 70
Winch'ter St. Bridge	17 56			3 31	266 97	215 06	502 90
Queen St. Subway...				70		29 00	29 70
Gerrard St. Bridge ..				37 85		11 25	49 10
Dupont St. Culvert..	5 00				47 51	100 90	153 41
							13,712 78

ISLAND BRIDGES, WHARVES, ETC.

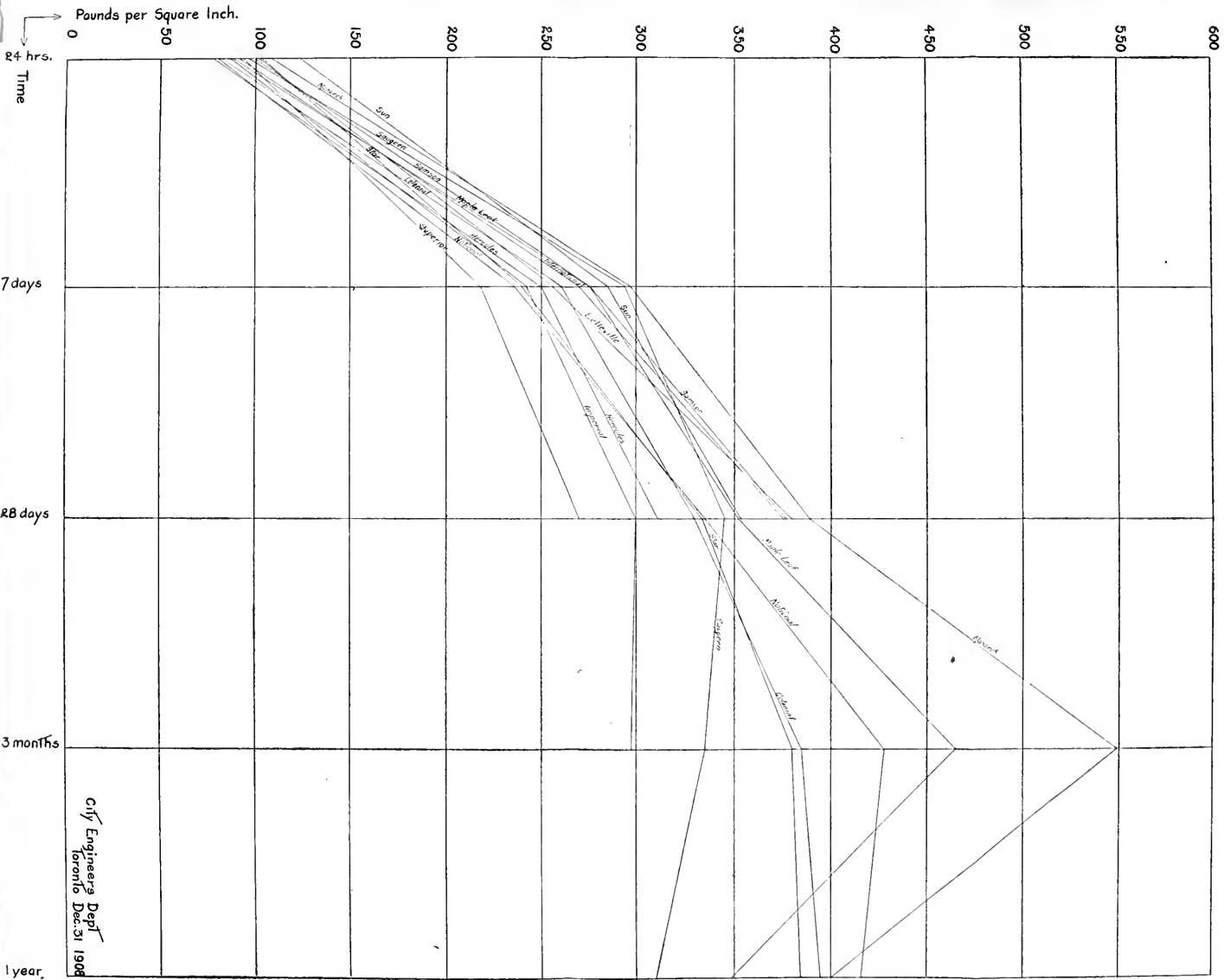
Island bridges and wharves.....							
Esplanade and City docks	7 20				113 30	296 00	416 50
Level crossing, Spa- dina Ave.	133 59	12 85			2,006 42	1,792 70	3,945 56
Dufferin St. dump...				1 38		252 00	253 38
Public conveniences..				719 94		539 00	539 00
						2,714 55	3,434 49
							8,588 93

1908 CEMENT TESTS 3 parts Sand to 1 part Cement



City Engineers Dept
Toronto Dec. 31 1908

1908
CEMENT TESTS
3 parts Sand to 1 part Cement



City Engineers Dept
Toronto Dec. 31 1908

— NEAT CEMENT TESTS 1908 —

Pounds per Square Inch.

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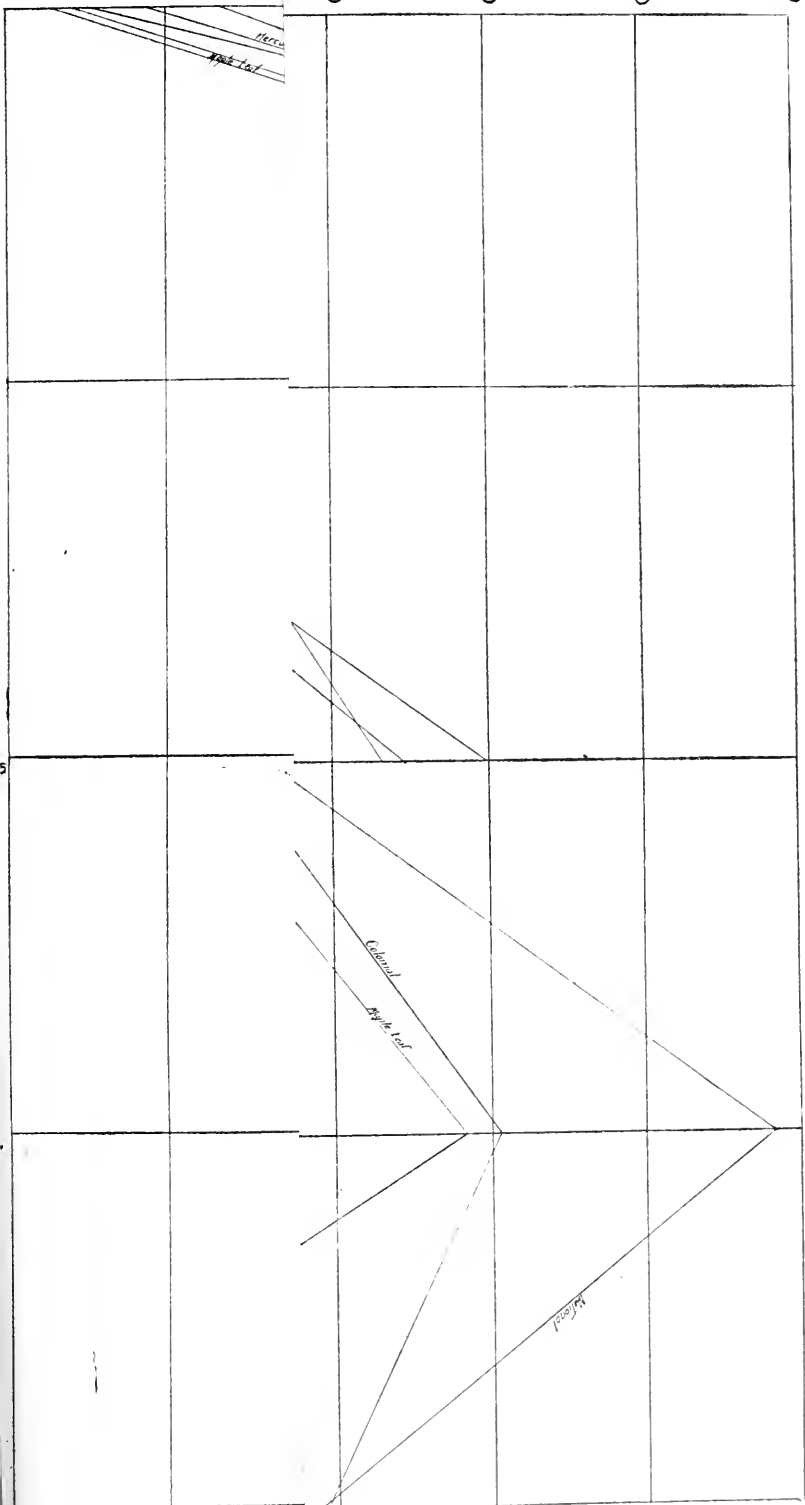
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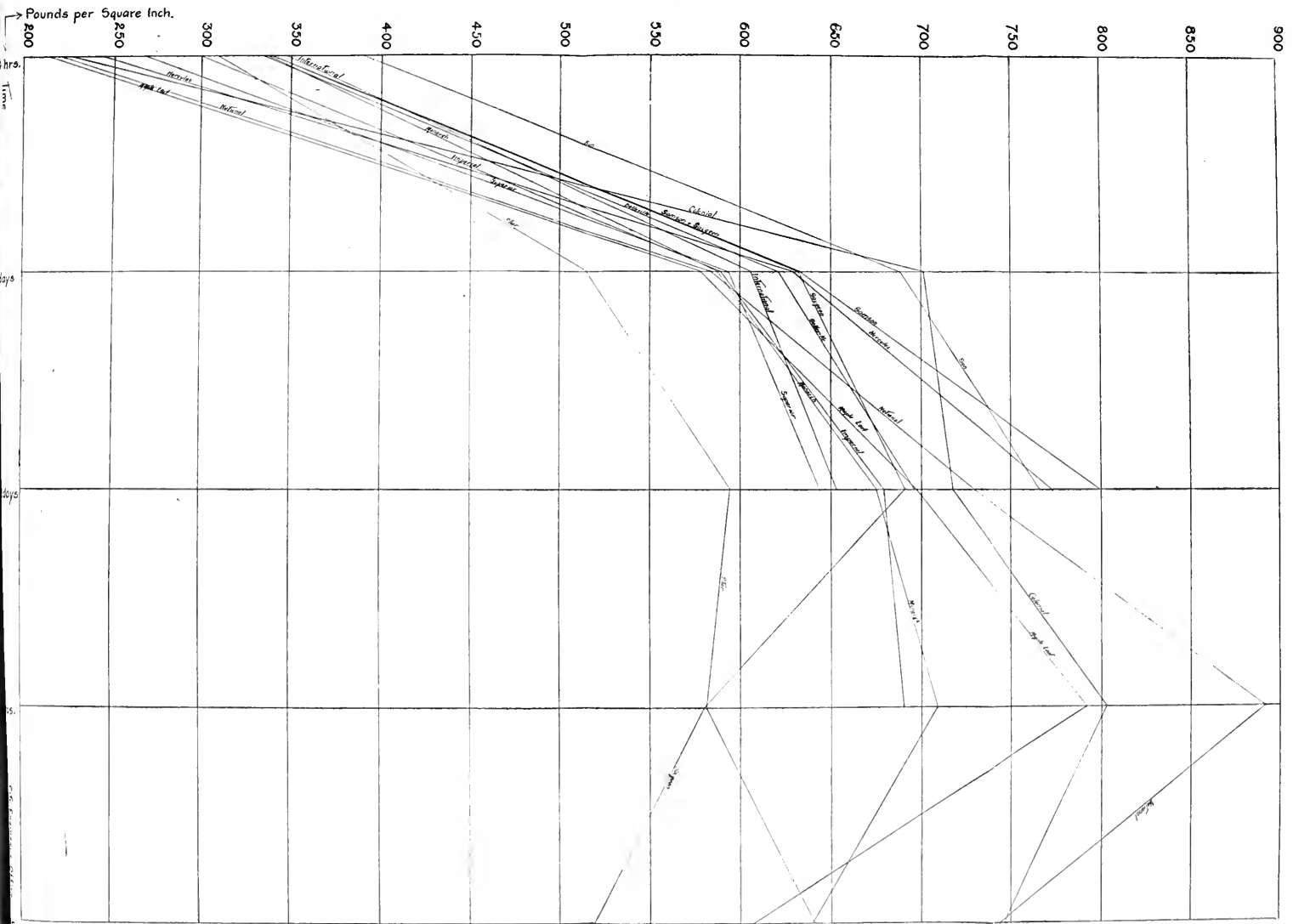
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— NEAT CEMENT TESTS, 1908 —



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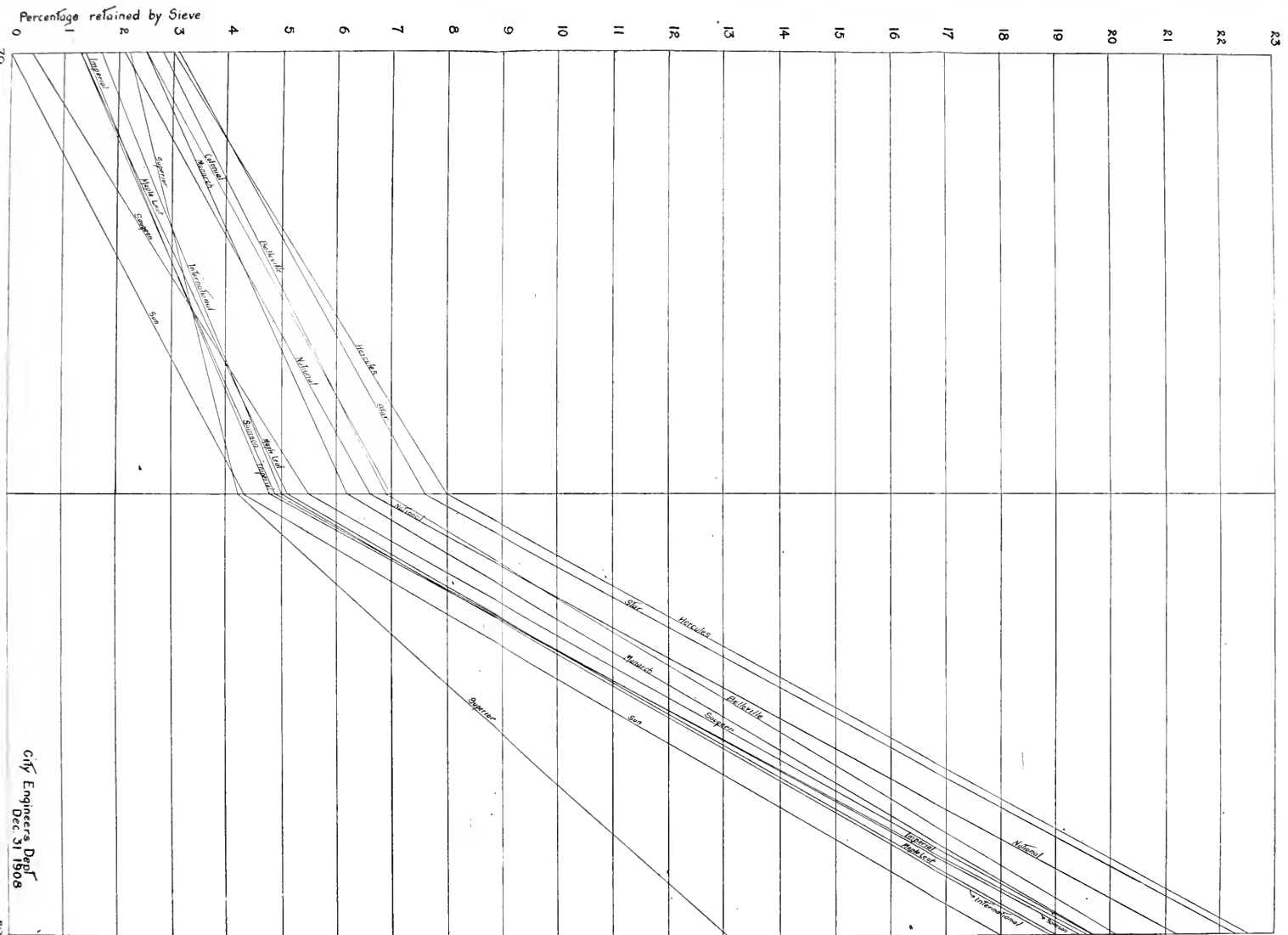
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City Engineers Dept
Dec. 31 1908

Sewers, Drains and Special Works.

CITY ENGINEER'S DEPARTMENT.

Toronto, December 31st, 1908.

MR. C. H. RUST,
City Engineer.

DEAR SIR.—Herewith I submit the Annual Report, showing in detail the work done under the supervision of this branch of the Department.

The following sewers were constructed during the year:

9-inch tile pipe	60	lin. ft.
12-inch tile pipe	25,024	"
15-inch tile pipe, in concrete	5,392	"
18-inch tile pipe, in concrete	1,612	"
24-inch tile pipe, in concrete	7,049	"
42-inch steel pipe	410	"
2 ft. x 3 ft. brick sewer	7,439	"
3-ft. 6-in. circular brick	1,203	"
12-inch x 12-inch box drain	150	"
	<hr/>	
	48,539	"

or 9.19 miles.

There are 275.01 miles of sewers in the City.

During the year there were:

188 new manholes built,
243 manholes repaired,
845 new gullies built,
503 gullies repaired,
108 miles of sewers flushed and cleaned.

There are 71 automatic flush tanks in the City.

GENERAL SEWER REPAIRS.

During the year the old box drain on Leslie Street from Queen Street to Ashbridge's Bay, which has been requiring repairs continually for years back, was replaced by a 3 ft. 6 in. circular brick sewer from

Queen Street to the water's edge, and a 42-inch steel pipe carried out from this point on piles to the deep water, a special appropriation having been received to defray the cost of this work.

A 24-inch tile pipe overflow sewer was also laid on DeGrassi Street from Queen Street to Wardell Street, in order to obviate any further floodings which have so often occurred on DeGrassi Street and Wardell Street. A special appropriation was also received to carry out this work.

SEWERS WEST OF RONCESVALLES AVENUE.

During the summer of 1907 the York County Loan applied for a sewer system for their large stretch of residential property west of Roncesvalles Avenue lying between Queen Street and Bloor Street. In accordance with this request, the City Engineer, on August 30th, 1907, recommended the system on the initiative principle.

Just about the time tenders were to be called for the work, a siege of hard times occurred and the City Council ordered that the Engineer construct the system by day labor.

A full list of the sewers constructed will be found in table No. 2, and among them will be noticed that a syphon was constructed on the lower portion of Sunnyside Avenue and on Queen Street into the King Street sewer. This syphon is the first one built in Toronto, and is giving entire satisfaction.

WOODBINE SEWERAGE SYSTEM.

The above system was completed in 1907, and a full description of the work is given in the annual reports for 1906 and 1907. Since completion it has been found necessary to make additions to the system by constructing sedimentation basins on the up-stream side of the sewer at the Kenilworth Avenue pumping station and the Woodbine Avenue pumping station; each basin consists of a rectangular chamber 16 ft. x 14 ft., with baffle walls to intercept the sand and road detritus which were causing considerable trouble in the pump chambers and also in the septic tanks, the latter having had to be cleaned out twice since the completion of the system. These sedimentation basins appear to be answering the purpose for which they were constructed, in a satisfactory manner. It has also been necessary during the year to replace part of the main effluent carrier which was carried away by the storms and high water of the Spring.

TABLE NO. 1.—SHOWING SEWERS CONSTRUCTED DURING 1908.

Street.	From.	To.	Size.	Description.	Length.	No. Manholes.	No. Gullies.	No. P. D. Connections.	Average Depth.	Soil.	Inspector.	Contractor.
Sunnyside Ave....	Geoffrey St.....	Marmaduke St....	15 "	"	945	3	....	58	10.40	s. & cl. (wet)	Hutcheson.	"
Sunnyside Ave....	Queen St.....	Fern Ave.....	24 "	"	2202	6	....	95	10.51	sand & cly	R. Hucheson & A. Birks.	"
Roncesvalles Ave..	Constance St....	Marmaduke Ave..	24 "	"	554	1	....	....	15.80	sand	R. Patterson	"
Indian Rd.....	Geoffrey St....	Marmaduke Ave..	15 "	"	1020	3	....	68	11.37	run'g sand	W. W. Moss	"
Fern Ave.....	Sunnyside Ave....	Roncesvalles Ave..	12 "	"	564	2	....	30	10.51	clay	R. Patterson	"
Garden Ave.....	Sunnyside Ave....	Roncesvalles Ave..	12 "	"	560	2	....	34	11.49	clay	R. Patterson	"
Galley Ave.....	Sunnyside Ave....	Roncesvalles Ave..	12 "	"	550	2	....	36	12.60	clay	R. Patterson	"
Pearson Ave.....	Sunnyside Ave....	Roncesvalles Ave..	12 "	"	544	2	....	32	10.61	clay	R. Patterson	"
Marion St.....	Sunnyside Ave....	Roncesvalles Ave..	12 "	"	540	2	....	30	9.99	clay	R. Patterson	"
Queen St.....	Roncesvalles Ave..	Sunnyside Ave....	24 "	"	613	3	....	....	7.69	clay	R. Patterson	"
Marmaduke St....	Roncesvalles Ave..	Indian Rd.....	24 "	"	1059	4	....	52	13.80	sand & cly	R. Patterson	"
Indian Rd.....	Marmaduke St....	Hewitt Ave.....	24 "	"	730	3	....	23	11.44	sand	R. Patterson	"
Indian Rd.....	Hewitt Ave.....	a pt. 60 ft. s. of Bloor St.	18 "	"	1297	5	....	58	13.37	sand	R. Patterson	"
Sunnyside Ave....	Marmaduke St....	Howard Pk. Ave..	12 "	"	355	1	....	23	11.13	sand	A. Birks.	"
Hewitt Ave.....	Indian Rd.....	East end.....	12 "	"	271	0	....	14	9.39	sand	Chas. North	"
Bonstead Ave.....	Indian Rd.....	East end.....	12 "	"	307	0	....	19	7.67	sand	Chas. North	"
Radford Ave.....	Indian Rd.....	East end.....	12 "	"	288	1	....	18	9.83	sand	Chas. North	"
Thorold Ave.....	Indian Rd.....	East end.....	12 "	"	290	1	....	18	9.73	sand	Chas. North	"
Ridout St.....	Indian Rd.....	Indian Grove.....	15 "	"	412	2	....	15	12.87	sand	R. Patterson	"
Indian Grove.....	a pt. 220 ft. s. of a pt. 520 ft. n. of Ridout St.	Ridout St.	12 "	"	842	5	....	43	8.65	sand	R. Patterson	"
Cleansing pipe for siphon under G.T.R. into the lake foot of Sunnyside Ave.	Ridout St.	Sunnyside Ave.	12 "	Cast iron	200	2	7.00	clay	R. Patterson	"

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TABLE No. 2.

SHOWING COST OF SEWERS CONSTRUCTED BY DAY LABOR DURING 1908.

Street.	From.	To.	Size.	Description.	Length.	City's Tender.	Next Lowest Tender.	Total cost of work exclusive of interest.	Difference between actual cost and lowest Contractor's Tender.	
									Loss.	Gain.
						\$ c.	\$ c.	\$ c.		\$ c.
Bedford Road.	A point 241 ft. s. of Dupont St.	Davenport Road..	12 in.	Tile ..	335	650 00	678 00	601 86		76 14
Ulster Ave.	College St.	Vankoughnet St..	12 "	" "	615	No Tender				
Leslie St.	Ashbridge's Bay..	Queen St.	3/ 6"	circ'lar Brick.	1,203	"				
Foxbar Road.	Surface drain	Queen St.	24 in.	Tile ..	394	"				
De Grassi St.	Queen St.	Wardell St.	24 "	" "	542	"				
Hagerman St.	Present terminus	A point 60 ft. e.	9 "	" "	60	"				
Shaw Place.	A point 450 ft. w. of Shaw St.	A point 60 ft. w..	12 "	" "	60	"				
Dovercourt Road..	Garrison Creek ..	Shannon St.	12 "	" "	190	"				
Wright Ave.	Sunnyside Ave ..	Roncesvalles Ave	12 "	" "	584	"				
High Park Boulev'd	Sunnyside Ave ..	Roncesvalles Ave	12 "	" "	605	"				
Geoffrey St.	Sunnyside Ave ..	Roncesvalles Ave	12 "	" "	587	"				
Geoffrey St.	Sunnyside Ave ..	Indian Road ..	15 "	" "	580	"				
Walter St.	Sunnyside Ave ..	Roncesvalles Ave	12 "	" "	586	"				
Constance St.	Sunnyside Ave ..	Roncesvalles Ave	12 "	" "	600	"				
Sunnyside Ave ..	Fern Ave.	Geoffrey St.	24 "	" "	1,155	"				
Sunnyside Ave ..	Geoffrey St.	Marmaduke St..	15 "	" "	945	"				
Sunnyside Ave ..	Queen St.	Fern Ave.	24 "	" "	2,202	"				
Roncesvalles Ave.	Constance St.	Marmaduke St..	24 "	" "	354	"				
Indian Road.	Geoffrey St.	Marmaduke St..	15 "	" "	1,020	"				
Roncesvalles Ave.	Sunnyside Ave ..	Roncesvalles Ave	12 "	" "	564	"				
Garden Ave.	Sunnyside Ave ..	Roncesvalles Ave	12 "	" "	550	"				
Galley Ave.	Sunnyside Ave ..	Roncesvalles Ave	12 "	" "	550	"				
Pearson Ave.	Sunnyside Ave ..	Roncesvalles Ave	12 "	" "	544	"				
Pearson St.	Sunnyside Ave ..	Roncesvalles Ave	12 "	" "	540	"				
Queen St.	Roncesvalles Ave	Sunnyside Ave ..	24 "	" "	613	"				
Marmaduke St.	Roncesvalles Ave	Indian Road ..	24 "	" "	1,059	"				
Indian Road.	Marmaduke St..	Hewitt Ave.	24 "	" "	730	"				
Indian Road.	Hewitt Ave.	A point 60 ft. s. of Bloor St.	18 "	" "	1,297	"				
Sunnyside Ave.	Marmaduke St..	Howard Park Ave	12 "	" "	355	"				
Hewitt Ave.	Indian Road ..	East end.	12 "	" "	271	"				
Boulevard Ave.	Indian Road ..	East end.	12 "	" "	307	"				
Radford Ave.	Indian Road ..	East end.	12 "	" "	288	"				
Thorold Ave.	Indian Road ..	East end.	12 "	" "	290	"				
Ridout St.	Indian Road ..	Indian Grove.	15 "	" "	442	"				
Indian Grove.	A point 220 ft. s. of Ridout St.	A point 520 ft. n. of Ridout St.	12 "	" "	842	"				
Cleaning pipe for syphon und'r G.T. of		R. into lake, foot of Sunnyside Ave ..	12 "	Cast Iron	200	"				

In addition to the above, baffle boards have been placed in septic tank No. 3, upon the suggestion of Dr. Amyot, Provincial Bacteriologist.

LOCAL IMPROVEMENT SEWERS.

Table No. 1 shows in detail the number of local improvement sewers constructed during the year.

Table No. 2 gives a list of those constructed by day labor.

DREDGING SEWAGE DEPOSITS OUT OF SLIPS.

Sewage deposits were dredged from the following slips during the year:

Yonge Street sewer outlet	1,210 $\frac{2}{3}$ cu. yds.
Church Street "	1,972 "
Jarvis Street "	2,499 "
Sherbourne Street "	2,499 "
Berkeley Street "	4,998 "
Parliament Street "	6,146 $\frac{1}{3}$ "
Total	19,325 "

The following table shows the number of lineal feet of private drains constructed during the year:

	6-in.	9-in.	12-in.
January	1,921	33	—
February	1,426	66	—
March	4,521	439	—
April	6,842	652	—
May	7,355	632	—
June	7,533	450	—
July	6,236	491	33
August	6,475	456	33
September	5,879	533	—
October	7,567	702	—
November	4,891	468	—
December	2,689	129	30
	63,335	5,051	96

A total of 68,482 feet, or 12.97 miles.

In addition to the above, there were

- 77 private drains repaired.
- 53 private drains flushed.
- 14 private drains lowered.

RAILWAY CROSSINGS.

There are eighty-two railway crossings in the City. During the year, by order of the Dominion Railway Board, gates were placed at the following points:

Front Street, at entrance to freight sheds—G. T. R.

Jameson Avenue—G. T. R.

Bloor Street—G. T. R. Northern Division.

Winchester Street at the Don—C. N. Railway.

Total number protected by gates and watchmen, 24.

The gates are all in good working order.

At Church Street and Esplanade, by order of the Railway Board, the G. T. R. has to keep a watchman from 7 o'clock a.m. to 7 o'clock p.m. from April 15th to November 15th, Sundays excepted.

Two crossings have been added during the year, viz:—Lansdowne Avenue, protected by a subway, not yet completed, and Main Street, East Toronto, protected by a bridge.

All these crossings were inspected at intervals during the year. Several were found to be in need of repairs, and upon being notified, the railway companies promptly did what was required to put them in a safe condition.

SUMMARY.

Crossing protected by watchmen only	8
" " gates	24
" " bells	3
" " bridges	8
" " subways	5
Crossings unprotected	34
<hr/>	
Total number of crossings	82

The Toronto Railway Company have renewed the following tracks during the year:

	feet.
College St., McCaul St. to Spadina Avenue, both tracks	3,378
Spadina Ave., Knox College to Bloor, east track	2,292
Queen St., Bathurst to Dundas, both tracks	8,039
Front St., Yonge to Church, both tracks	1,800



FLUSHING VALVE, SEWER SYPHON, QUEEN ST. AND SUNNYSIDE AVE.

	feet.
Front St., York to Simcoe	620
King St., Spadina to Bathurst, both tracks	3,800
Yonge St., College to Carlton	590
These are 7-in. 90 lb. girder rail.	
Bloor St., Dufferin to Lansdowne	3,892
7-in. 70 lb. T-rail.	

303 iron trolley poles have been erected during the year, 28 moved, and 244 painted.

During the year the Toronto Railway Company have erected iron trolley poles on the following streets:—

on Bloor Street, from Dufferin to Lansdowne,	36
on Scollard Street	11
on Gerrard Street, from Parliament to River	33
on Gerrard Street, from Logan to 700 feet east	15
on Dundas Street, from Ossington to Bridges	94
on Howard Park Avenue	34
on Roncesvalles Avenue	80

The following is a list of the trolley poles moved by the company:—

Broadview and Danforth	1
Springhurst Avenue	1
Glen Road	1
King and Dufferin	1
Montrose and College	1
Queen and Lee Avenue	1
Avenue Road	6
Dovercourt Road, north of Bloor	5
Gerrard, Logan, 700 feet east	4
Queen and Armour	1
Dundas and Lynd	2
Roncesvalles, north of Queen	1
Dundas and Roncesvalles	1
Bathurst, North of King	1
Queen and Elmer	1

TELEPHONE POLES ERECTED DURING 1908.

Street.	No. of Poles.	
Havelock St. w.s.	7 poles.	1 stub.
Avenue Road, w.s.	6 "	1 "
Heath St., n.w. cor. Avenue Rd.		1 "
Montrose Ave., e.s.	4 "	1 anchor
Manning Ave., w.s.	12 "	1 "
Palmerston Avenue	3 "	
Dupont Street	3 "	
Woodbine Avenue	9 "	
Havelock Street	4 "	
Jones Avenue	1 "	
Clarendon or Schiller	7 "	
Russill Hill Road	1 "	
Waverley Road	4 "	
Cor. Knox and Eastern		1 stub.
Gerrard Street	3 "	1 "
Wright Avenue	4 "	1 "
Montrose Avenue	2 "	
Leslie Street	12 "	1 " 1 anchor
Olive Avenue	5 "	1 "
Davenport Road	2 "	1 "
Simcoe Street	3 "	
Chicora Avenue	7 "	2 "
Dewson Street	1 "	1 "
Dovercourt Road	3 "	1 "
Bloor Street	1 "	
Sinclair, e.s., south from Conduit		3 poles.
Parkway Ave., w.s., south from Dundas	5 "	
Lane east off Vanauley, south of Grange, north side	3 "	
Pears Avenue	4 "	
Shanly, s.s., west from Dovercourt	3 "	
Dovercourt Rd., e.s., north of Shanly	5 "	
Hallam, s.s., east of Ossington	5 "	
Beatrice, w.s., north of Arthur	7 "	
Gerrard, n.s., east of Jones	3 "	
Cross St., s.s., east from Gladstone	2 "	
Victor Ave., n.s., east from Broadview	8 "	
Abbott Ave., s.s., west of Dundas	6 "	
Wallace Ave., s.s., from Symington to G. T. R. tracks	8 "	
College St., n.s., west of Sorauren	7 "	
Geoffrey St., s.s., continuing lead to Roncesvalles Avenue	5 "	
Ridout St., n.s., Indian Road to Indian Grove	4 "	
Indian Grove Ave., north from Ridout	3 "	
Carlaw Ave., north from Queen	7 "	
Fern Ave., extending lead to Roncesvalles	5 "	



SHEWING FORMS



LAYING PIPE



COMPLETED

CONCRETE ARCHED SUPPORT FOR 24-INCH TILE SEWER ON SUNNYSIDE AVE.

Alhambra Ave., north of Boustead	5 poles.
Follis Ave., n.s., Clinton to Christie	3 "
Greenwoods, w.s., Falstead to Danforth	14 "
Clinton, w.s., north of Follis	4 "
Binscarth Rd., s.s., opp. Sir William Meredith's res.	1 "
Gerrard St., s.s., Parliament to Sackville	7 "
Poplar Plains Rd., w.s., Balmoral to 2 poles north of Lynwood ...	5 "
Conduit St., s.s., Dundas to City Limit	3 "
Shanly St., n.s., west from Gladstone	2 "
Dearbourne, n.s., east from Broadview	6 "
Wolfrey, s.s., east from Broadview	8 "
Pearson, s.s., extending lead to Roncesvalles	5 "
Thorold, s.s., east from Indian Road	3 "
Garden Avenue, s.s., west from Sorauren	3 "
Empress Crescent, n.s., continuing lead west from Dowling.	3 "
Laxton Avenue, s.s., west from Jameson	6 "
Road west of Keating's Channel, n.s.	4 "
Warren Road, s.s., Clarendon to north of Lynwood.	8 "

BELL TELEPHONE POLES MOVED DURING 1908.

Street.	From.	No. Poles.
Avenue Road	W.s. Edmund to St. Clair	3.
S.e. cor. Clinton and Mutual	Bloor	1 & 1 stub.
Broadview Ave.	167 ft. n. Carlton to 75 s. Maitland	9.
Davenport Road	Simpson to Withrow	1 stub.
Czar, s.s.	Dupont to Bedford	1 stub.
Major	Yonge to North	2 stubs
Dalhousie	Cor. of Bloor.	1 pole.
Poplar Plains Road ..	Shuter to Gould	14 & 1 stub
John	Edmund to McPherson	6.
Shaw	King to Wellington	8 & 1 stub.
Avenue Road.	Arthur to College	17 & 2 stubs.
Wells	Old City limits north	19
Palmerston Ave.	{ Kendall to Bathurst	{ 5 & 1 stub.
Bathurst.	{ Brunswick to Howland.	{
Front	Cor. Robinson	1.
Searle Road	Opp. Adelaide	1.
Harbord	Yonge to Bay	5.
Castle Frank Ave.	140 ft. n. of Chestnut Park Road.	1.
Saulter	Huron to Spadina	2.
Ashdale Ave	McKenzie Cres. to limit Lot No. 16	5.
Lee Ave	Queen to Eastern Ave	12 & 2 anchors.
Rusholme Road	Cor. Queen	1.
Gerrard	Queen to City limits.	2.
Niagara	College to Dundas	3.
	Parliament to River.	8 & 1 stub.
	Bathurst to Tecumseth	4 & 1 stub.

BELL TELEPHONE POLES MOVED DURING 1908—*Continued.*

Street.	From.	No. Poles,
N. w. cor. Clarke and	Bolton.....	1 & 1 stub.
Grange Road.....	McCaul to Beverley.....	1 & 1 stub.
Baldwin.....	Spadina to Kensington.....	1 & 1 stub taken out.
Defoe.....	Shaw to Niagara.....	8 & 1 stub.
Grace.....	1,494 ft. n. College to 410 ft. north	23.
Howard.....	Glen Road to Parliament.....	3 & 1 stub.
N.w. cor. Harcourt &	Pape.....	1.
Sumach.....	Gerrard to Spruce.....	1.
Orisle Road.....	St. Clair to Heath.....	6.
Shaw.....	West side.....	4, 1 stub & 1 anchor.
Dovercourt Road and	Van Horne.....	6.
Don Esplanade.....	.....	1.
Greenwoods Ave.....	.....	1 & removed 1.
Hayter, n.s.....	.....	1.
Scollard.....	Yonge to Hazelton.....	13.
Hogarth Ave.....	East from Broadview.....	10 & 1 anchor.
Woodhewn Ave.....	N.e. cor. of west end.....	13, 2 stubs & 1 anchor.
Eastern Ave.....	Cor. Saultter.....	1.
Springhurst Ave., opp.	Tyndali.....	2.
DeGrassi.....	Queen to Wardell.....	1.
Britain.....	Cor. George.....	2 & 1 stub.
Dundas.....	Ossington Ave. to Rusholme Rd.....	1.
St. Helens Ave.....	Dublin to Bloor.....	6.
Cor. Howard Park Av.	and Roncesvalles.....	5.
Brock Ave.....	In way of G.T.R. tracks.....	1 stub.
Bellair.....	Cumberland to Yorkville.....	1 stub.
Cor. Collier St. and	Park Road.....	1 stub.
Broadview Ave. and	Langley.....	2 anchors, guys, etc.
Beaconsfield Ave., e.s.	Dundas to Afton.....	13 poles.
Cor. Spruce & Sumach	.....	2 stubs.
Starr Ave., at bend in	street.....	2 poles.
Bloor, for new railway	gates of G.T.R.....	1.
Dundas.....	Lansdowne to St. Helen's.....	3.
Cor. Davenport and	Bedford Roads.....	1 stub.
Greenwoods Ave. e.s.,	north railway tracks.....	6 & 2 anchors.
Hamburg Ave., cor.	Van Horne.....	1 stub.
Parkway Ave., cor.	Dundas.....	1 stub.
Yonge and Balliol.....	.....	1 pole.
Hawthorne and Briar	Hill.....	1 pole.
Avenue Road.....	350 ft. n. of Balmoral to St. Clair.....	1 pole.

TELEPHONE POLES PAINTED DURING 1908.

Street.	No. Poles.
Bathurst Street	55
Dupont Street	18
Barton Avenue	11
Ulster Avenue	23
Brunswick Avenue	36
Bloor Street	61
Manning Avenue	24
Davenport Road	2
Robert Street	33
Sussex Avenue	3
Clinton Street	39
Grace Street	15
Beatrice Street	14
Montrose Avenue	16
Shaw Street	30
Ossington Avenue	46
Concord Avenue	33
Delaware Avenue	54
Hallam Street	9
Shanley Avenue	5
Dovercourt Road	9
Dewson Street	5
Harbord Street	38
Havelock Street	18
McPherson Avenue	21
University Crescent	8
Crawford Street	10
Arthur Street	42
Markham Street	33
Albany Avenue	27
Lippincott Street	26
Total	764

BELL TELEPHONE UNDERGROUND WORK FOR YEAR ENDING
DECEMBER 31st, 1908.

	Conduit.		Duct.	
	Ft.	In.	Ft.	In.
Queen Street, from Sorauren to King	1,375	6	12,795	6
Queen Street, branches from Sorauren to King.....	559	2	1,771	10
Poplar Plains Road, Cottingham to Dupont.....	1,013	6	4,434	
Dupont Street, Huron to Davenport Rd.....	577	6	2,887	6
Dupont Street, branches from Huron to Davenport Rd	271	9	684	3

	Conduit.		Duct.	
	Ft.	In.	Ft.	In.
Poplar Plains Rd., branches from Cottingham to Dupont Street	417	6	835	
Front Street, from Sherbourne to Cherry.....	2,345		14,070	
Front Street, branches from Sherbourne to Vine....	838		1,676	
Eastern Avenue, branch opposite Don Driveway....	115		230	
Victoria and King, branches into Royal Bank.....	284		852	
Huron Street, branches at Willcocks, Sussex and Bloor	454	6	1,519	
Queen Street, from Leuty to Woodbine Avenue.....	2,460	6	22,496	
Queen Street, branches from Leuty to Woodbine.....	1,322	6	2,761	
Bloor Street, from Brunswick to Bathurst.....	989	6	8,905	
Bloor Street, branches from Brunswick to Bathurst..	461	6	1,959	
Yonge Street, from Roxborough E. to Woodlawn.....	2,280	6	17,714	
Yonge Street, branches from Roxborough E. to Woodlawn	798	6	1,707	6
Bloor and Brunswick Avenue branch	106	3	212	6
Howard and Parliament branch	575	9	2,113	
Beaty Avenue, branch crossing Queen Street.....	179		358	
Roncesvalles Avenue, from Queen Street north.....	487		3,704	
Roncesvalles Avenue, branches from Queen St. north	63	6	190	6
Callendar Street, branch from manhole on Queen and Wilson	76		152	
	18,051	11	105,027	7

CONCRETE MANHOLES CONSTRUCTED BY THE BELL TELEPHONE
COMPANY DURING 1908.

On Queen Street, from Sorauren to King	3
On Poplar Plains Road, from Cottingham to Dupont	3
On Dupont Street, from Huron Street to Davenport Road.....	3
On Front Street, from Sherbourne to Cherry	5
On King Street, from Victoria to Royal Bank.....	2
On Queen Street, from Leuty Avenue to Woodbine Avenue.....	8
On Bloor Street, from Brunswick to Bathurst	2
On Yonge Street, from Roxborough E. to Woodlawn Avenue.....	7
On Howard and Parliament	1
On Roncesvalles Avenue, from Queen Street north	2
	36

Enlarged Manholes—

At Bloor and Huron Streets	1
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TORONTO ELECTRIC LIGHT CO.

TILE CONDUIT, 1908.

Street.	From.	To.	Lineal Feet of Conduit.	Duct Ft.
			Ft. In.	
Elizabeth w.s.	Foster Place...	Grenville	2,751 0	39,852
Grenville, n.s.	Elizabeth	Surrey Place ..	144 6	1,794
Surrey Place, w.s.	Grenville	St. Albans	1,025 0	12,300
Queen's Park, w.s.	St. Albans	Bloor	2,394 6	28,732
Bloor Street, s.s.	Queen's Park..	Bedford Road ..	861 0	10,332
Bedford, e. & w.	Bloor	Davenport	2,417 0	29,004
Davenport, s. & w.	Bedford	Power House..	1,733 0	20,796
Queen Street, s.s.	Elizabeth	Bay	559 0	6,708
Bay Street, e.s.	Wellington....	Front	512 0	12,288
Shaw Street	Defoe	King	528 0	6,336
King Street	Shaw	Mowat	3,022 6	36,270
Mowat	King	Liberty	764 6	9,174
			16,532 0	204,526

TORONTO ELECTRIC LIGHT CO.

IRON CONDUIT, 1908.

Street.	From.	Lineal Feet.
Beverley and D'Arcy .....	.....	128
Victoria and Shuter.....	.....	80
Tranby Avenue.....	Bedford Road east	710
Elgin Avenue.....	Extension s. and e.	216
Major Street	s. of Lowther to n. of Bloor	324
	Total.....	1,450 feet

Respectfully submitted.

J. D. SHIELDS,

Assistant Engineer.

Report of Assistant Engineer in Charge of Intercepting Sewer and Other Special Works.

CITY ENGINEER'S DEPARTMENT,
Toronto, December 31st, 1908.

MR. C. H. RUST,
City Engineer.

DEAR SIR,—Herewith I present report of the work carried on and executed under my supervision for the year ending December 31st, 1908.

GENERAL.

The work executed by this department has been divided for the sake of convenience under the following headings:—

1. Main Drainage Works.
2. Viaduct.
3. Sea Wall at Exhibition Grounds.
4. Sea Wall between Indian Road and the Humber River.
5. Designs, Estimates and other Special Works.

1. MAIN DRAINAGE WORKS.

Under this heading is included the preliminary calculations and general consideration of the whole scheme of collecting and treating the sanitary sewage of the City by means of intercepting sewers and septic tanks located in the eastern part of the City; a careful and more detailed study of the High Level Intercepting Sewer; and the laying out of different grades, and the preparing of specifications and contract plans for that portion between Jarvis Street and a point near the Don Esplanade, along Duchess, Ontario, Sydenham, Sackville and St. David Streets, Wyatt Avenue and Mark Street.

The tenders for this work were called for on December 15th, but the date was postponed.

Preparatory to fixing definitely the precise location of this sewer, a large number of borings were made along its route, and the considera-

tion of the future population and the acreage of the City and the probable water consumption were discussed; the sewer being designed to include the dry weather flow of the whole City north of its location, allowing for maximum growth during the next 25 years.

As a means of checking the volume of sewage at the present time with the measured volume of 1891 and 1900, gaugings were made during the months of October, November and December. Comparisons between the volume of sewage in 1891, 1900 and 1908 appear in the appendix. It will be noticed that the dry weather flow of 1891 was roughly, 75 gallons; of 1900, 109 gallons; and of 1908, 13 gallons per head per day. The high results obtained in 1900 were, no doubt, owing to the time of the year in which the gaugings were made and the presence of a great deal of subsoil water in the sewers. I would also point out that the fluctuation between midnight and noon is much greater in 1908 than in other years.

The methods of gauging were similar to that pursued in 1891 and 1900, and apparatus of similar character was used. The formula used for the calculation of the volumes was also identical, and there can be no discrepancy between the results of 1891, 1900 or 1908, on the scores either of apparatus or calculations.

For that portion of the City between Bay Street and Cherry Street, it was thought advisable to measure the sewage at Front Street, so that the information could be utilized in the design of the Low Level Sewer, which we now have in hand.

The gaugings of 1900 were made along Esplanade Street, and an appropriate amount of sewage has been allowed for the district between Front Street and the Esplanade, as well as the quantities for the small districts near the Don and at the eastern end, which we were not able to gauge.

A photograph of the apparatus used at the Rosedale Creek Sewer is included.

2. VIADUCT.

Under this heading is included the separation of grades between the Logan Avenue Crossing of the G. T. Railway and the Queen Street Crossing of the C. P. R., G. T. R. Belt Line and C. N. Railway at the east end, and Bathurst Street at the west end.

In connection with the above were associated Mr. W. F. Tye, of Montreal, Mr. F. L. Sommerville, of Toronto, and Mr. Isham Randolph, of Chicago, as consulting engineers.

At the instance of the Board of Railway Commissioners plans were prepared in this office of the elevation of tracks in the districts mentioned above, the existing streets being carried beneath the tracks at the present level. These plans were submitted to the Dominion Board of Railway Commissioners at the latter end of March, and were proved before the Board at its sitting in Toronto in May.

Immediately following this, borings throughout the entire districts were taken by the Railway Companies to supplement knowledge already at hand. The City was represented by this department in this work.

The Commission sat again in December and considerable work was done by this department, in preparing details, supplementary estimates and other information requested by the Corporation Counsel. On the 31st of December a draft order was made by the Board of Railway Commissioners ordering the Railway Companies to elevate four tracks along the water front between York and Cherry Streets.

A large amount of office work, in making plans, estimates, surveys, etc., was done in this connection in the carrying out of this case to the point attained at the conclusion of the year.

The feasibility and advisability of the construction of bridges over the Esplanade, for the carrying of vehicular and pedestrian traffic over the tracks along the water front, were also involved in the argument before the Board.

These bridges were planned by the Railway Companies to begin at or near Front Street on the north side, and after crossing the tracks, descending toward the Bay on obtainable grades. In view of the manifest injury to lake-borne traffic, and the extra rise and fall due to the bridges, this department made a series of experiments to show the relation of tractive effort to loads on various grades.

These experiments were made as complete as the time at our disposal would permit, and besides having in view the tractive effort for different grades, different classes of pavement were selected in order that each pavement could be classified to determine its individual efficiency.

Before continuing with figures determined by ourselves I wish to insert a table of results of exhaustive experiments on English roads by Gayffier and Parnell in 1892. These results are summarized as follows:

(Calling a load drawn on a level equal to 100).

On a rise of 1 in 100 or 1 per cent.	grade a horse can draw only 90.
" 1 in 50 or 2 "	" " 81.
" 1 in 40 or 2.5 "	" " 71.
" 1 in 30 or 3.3 "	" " 61.
" 1 in 26 or 3.85 "	" " 54.
" 1 in 20 or 5 "	" " 40.
" 1 in 10 or 10 "	" " 25.

This information is furnished in various engineering hand-books and certain empirical formulæ have been given, showing the resistance of carriages, etc., on roads depending on velocity, diameter of wheel and load. These formulæ are, however, of the most general kind, and the different classes of pavements are not recognized.

The experiments which are tabulated here were made in May and are confined to the following pavements, viz., cedar blocks, treated blocks, granite blocks, asphalt, bitulithic and brick, and were made in both wet and dry weather. Unfortunately, however, no experiments have been made during freezing weather, so that in this respect the results are incomplete.

From inspection of the notes and curves plotted it would be noticed, first, that the traction increased with the grade at a uniform rate, a straight line formula being applicable to the curves. At the same time, while the traction on cedar block, treated block, bitulithic and brick increased approximately at the same rate, the traction on granite block increased much more rapidly. Owing to the nature of the asphalt pavement it was impossible to get good results during fine weather, as the traction increased suddenly on the same grade with the increased power of the sun and the heat of the day. The results for asphalt, therefore, were very unsatisfactory during warm weather, but the tests of that pavement on wet days when the pavement was cool showed uniform and satisfactory results. The pavement offering the least resistance on each grade was found to be the brick pavement; with treated block and bitulithic about even for second place. Cedar block comes next, and lastly, the granite block, although for grade less than $14\frac{1}{2}\%$ the granite block pavement is superior to the cedar block.

All experiments were taken with a good steady team of horses harnessed to a lorry which carried a weight of $4\frac{1}{4}$ tons. The dynamometer used was the standard form manufactured by the Canadian Fairbanks Company, and the greatest load indicated by the dynamometer during steady pull was about 1,050 pounds. The starting pull, however, rose in some cases to between 1,200 to 1,500 pounds.

During wet weather when pavements having fairly steep grades were at all slippery the horses had some difficulty in keeping their feet under the load. This was noticed most particularly on the treated block pavement of York Street Bridge. The following curves summarize the experiments for each class of pavement. The data from which the curves are plotted are given in the appendix.

It is, of course, necessary in dealing with the various classes of pavement to take into consideration the provision of an adequate foothold for horses, and on this account it is worthy of notice that in connection with granite block pavement, while the tractive effort is higher than on other pavements, the foothold afforded is possibly much better.

As a specific instance from the tables, take Church Street. In this case the cedar block pavement is in a fair condition, and the grade ranges from 1.5% to 6%. Taking the pull required to keep the vehicle in motion at 330 pounds on the level, it will be seen that it requires three times the force to continue the load up the 6% grade. No such general figures as given by Gayffier and Parnell can be given for each of the different classes of pavement discussed herein, but each class of pavement has been worked out by itself, and the results obtained have shown that for any given pavement the increment of tractive effort is uniform, and a simple straight line formula can be applied to each class of pavement. These formulæ are appended hereto.

Let Y = the tractive effort required in pounds.

Let X = the per cent. of gradient for which it is desired to ascertain the tractive effort.

For Dry Weather.

For Brick Pavement	$Y = 200 + 103.3 X$
For Treated Block	$Y = 270 + 100 X$
For Bitulithic	$Y = 240 + 110 X$
For Cedar Block	$Y = 350 + 111.6 X$
For Granite Block	$Y = 260 + 174 X$

For Wet Weather.

For Treated Block . . . Y = 230 + 120 X

For Bitulithic Y = 200 + 96 X

For Cedar Block Y = 420 + 103.3 X

For Asphalt Y = 320 + 80 X

3. SEA WALL AT EXHIBITION GROUNDS.

I am pleased to report that the sea wall in front of the Exhibition Grounds is completed between Dufferin Street and the old wall in front of the New Fort. The progress at the site of the work was slow, due to a great deal of poor weather and the exposed position, but during the fine months of May, June, July and August the work progressed much more favorably. In all 163 cribs were placed, giving a total of 2,714 feet in length.

The filling behind the wall is composed of street cleanings and garbage, topped with earth brought down from Landsowne Subway, and from other excavations. About one-third of the total distance behind the wall is already filled, and will be ready for grading as soon as it is sufficiently settled.

4. SEA WALL BETWEEN INDIAN ROAD AND HUMBER RIVER.

This wall was begun on the 16th of September. The structure will extend from a point opposite Indian Road westerly fifteen hundred feet. The form of construction adopted by the Board of Control was an alternative design submitted by the Park Commissioner, calling for stone filled cribs resting on sand, gravel and boulders, and surmounted by a mass concrete wall, placed on stone ballast.

Two lines of timber cribwork at right angles to the shore between the shore and the site of the wall, and three cribs of forty-two feet each in length are placed, but no concrete has yet been placed. The balance of the cribs is now about completed at the contractor's yard and will be ready to be sunk when the spring opens up. Although no observations respecting the stability of the wall are yet possible, I would strongly urge that this type of wall be discontinued in future extensions of this project.

5. DESIGNS, ESTIMATES AND OTHER SPECIAL WORKS.

Designs and estimates were prepared or are in course of preparation for several structures, among which is a reinforced concrete arch bridge over Beatrice Street on line of Harbord Street extension, and suggested

designs for highway bridges for the depression of the Grand Trunk tracks at Dufferin, Dunn, Jamieson and Dowling Avenues in Parkdale.

In the month of April and May a small amount of shore protection work was done near the groynes at Simcoe Park, which were built near the end of the preceding year. The construction of the groynes were advantageous to a certain extent, but did not extend the shore line as far as it was hoped would do. The extraordinary high water of the early spring and summer probably had considerable effect on the whole shore line, and it is yet too early to judge the benefits accruing from the construction of these groynes in 1907. The high water was also responsible for the coast erosion at the foot of Leuty Avenue, and points in that vicinity. Temporary shore protection work was placed there in April. Several estimates were made at different times of shore protection and different schemes for sea walls and boulevards throughout the whole distance between Bathurst Street and the Humber River.

Respectfully submitted,

A. C. D. BLANCHARD.

Assistant Engineer.

REPORT OF ASSISTANT ENGINEER IN CHARGE OF INTERCEPTING SEWER AND SPECIAL SURVEYS.

APPENDIX I.

RESULTS OF MEASUREMENT OF TRACTIVE EFFORT IN MOVING LOADS ON PAVED STREETS.

Pavement—Treated Block.

Load—4½ tons.
Lorrie—2,740 lbs.
Team—2,940 lbs.

Observations made May 12th, 1908.

Street.	Distance.	Grade.	Wet		Dry		Remarks.
			Starting Pull.	Average Pull.	Starting Pull.	Average Pull.	
Nelson Court	John to Simcoe	None	1,000	250	1,200	240	Good condition.
Wellington	Church to Toronto, ....	.18	900	225	1,100	290	“ sticky when dry
York Street Bridge	Yonge to Bay .....	.44	1,000	266	1,200	325	“ “
North Approach	350 ft. south from Front	4.6	1,200	200	1,200	725	Fair condition—greasy when wet.
South-west Approach.	100 ft. from east end,	5.0	1,200	800	1,200	800	Good condition.
Simcoe	Station to Front	5.1	1,400	800	1,200	690	Good condition.

Pavement—Cedar Block.

Load—44 tons.
 Lorry—2,710 lbs.
 Team—2,940 lbs.

Observations Made May 13th, 1908.

Street.	Distance.	Grade.	Wet.		Dry.		Remarks.
			Starting Pull.	Average Pull.	Starting Pull.	Average Pull.	
Logan Avenue.	300 ft. s. of Queen	.58	.....	.....	1,200	420	Good condition.
	300 ft. s. to 800 ft. s. Queen	1.05	.....	.....	.....	475	"
	800 ft. s. to 1,100 ft. s. Queen	.57	.....	.....	.....	400	"
	1,100 ft. s. to 1,700 ft. s. Queen	.25	.....	.....	.....	350	"
	1,700 ft. s. to 2,100 ft. s. Queen	.62	.....	.....	.....	415	"
	Bridge to River St.	1.36	.....	.....	1,500	500	"
Gerrard Street	140 ft. to 240 ft. west	2.44	.....	.....	.....	650	"
	240 ft. to 340 ft. west	3.21	.....	.....	.....	675	"
	340 ft. to 440 ft. west	3.78	.....	.....	.....	750	"
	440 ft. to 550 ft. west	3.8	.....	.....	.....	800	"
Church Street.	550 ft. to River	.65	1,100	500	1,400	400	"
	100 ft. from Esplanade.	1.85	.....	600	.....	500	"
	100 to 200 ft. north	4.3	.....	850	.....	800	"
	200 ft. to 300 ft. north	6.0	.....	1,050	.....	1,000	"
	300 ft. to Front Street.		.....	.....	.....	.....	"

Pavement—Granite Block.

Esplanade Street.....	500 ft. w. Berkeley	1	.....	.....	1,200	280	Good condition.		
	500 ft. to 1,000 ft. w.....	1	.....	.....	.....	270	"		
	1,000 ft. to 1,500 ft. w.	1	.....	.....	.....	210	"		
	1,500 ft. to 2,000 ft. w.	25	.....	.....	.....	260	"		
	2,000 ft. to 2,500 ft. w.	25	.....	.....	.....	240	"		
	2,500 ft. to 3,000 ft. w.	25	.....	.....	.....	210	"		
	3,000 ft. to Scott St.	25	.....	.....	.....	225	"		
Lane 1st east Sincee off									
Wellington.....	200 ft.	1.3	900	425	.....	.....	Good condition.		
	100 ft. n. from Esplanade	2.4	.....	.....	1,100	750	} Very rough.		
Yonge Street	100 ft. n. to 200 ft. n.	5.0	.....	.....	1,200	950			
(Esplanade to Front) (	200 ft. n. to 300 ft. n.	4.4	.....	.....	.....	1,000			

Load—4½ tons.
 Lorry—2,710 lbs.
 Team—2,910 lbs.

Pavement—Brick.

Observations made June 4th, 1908.

Street.	Distance.	Grade.	Wet		Dry		Remarks.
			Starting Pull.	Average Pull.	Starting Pull.	Average Pull.	
Dundas. (Queen to Arthur)	400 ft. n. Queen	1.06	No results recorded on this pavement in wet weather.		1,000	200	Good condition.
	400 ft. n. to 800 ft. n. Queen . . . . .	.87				300	"
	800 ft. n. to 900 ft. n. Queen	1.25				350	"
	900 ft. n. to 1,000 ft. n. Queen	1.09				300	"
	1,000 ft. n. to 1,100 ft. n. Queen	2.41				350	"
	1,100 ft. n. to 1,400 ft. n. Queen	2.60			1,000	400	"
	1,400 ft. n. to 1,600 ft. n. Queen	2.75				475	"
	1,600 ft. n. to 1,900 ft. n. Queen	2.16				400	"
	200 ft. east of Dufferin.	none			900	200	"
	100 ft. west of Dufferin.	4.58				700	"
Queen St. Subway. (West Grade)	100 ft. w. to 200 ft. w. Dufferin.	4.2				700	"
	200 ft. w. to 300 ft. w. Dufferin.	3.95				7.0	"
	300 ft. w. to 400 ft. w. Dufferin.	1.85				450	"
	400 ft. n. Springhurst	3.35			900	520	"
Close Avenue (Springhurst to King)	600 ft. n. to 600 ft. n.	2.25				450	"
	600 ft. n. to 800 ft. n.	2.0				400	"
	800 ft. n. to 900 ft. n.	1.3				300	"
	900 ft. n. to 1,200 ft. n. . . . .	.9				275	"

Parent—Bitulithic.

Observations made May 13th and 14th, 1908.

Load—4½ tons.
Lorrie—2,710 lbs.
Team—2,940 lbs.

Street.	Distance.	Grade.	Wet.		Dry.		Remarks.
			Starting Pull.	Average Pull.	Starting Pull.	Average Pull.	
Bain Avenue.	200 ft. w. Carlaw	1.09	.....	.....	1,290	370	Good condition.
	200 ft. w. Pape to 300 ft. west.	1.5	.....	.....	1,200	400	
Park Road	100 ft. w. Pape to 200 ft. west.	3.0	.....	.....	1,300	575	"
	100 ft. w. Pape	4.0	.....	.....	1,400	676	"
	100 ft. from Bloor	.73	1,200	275	.....	.....	"
	100 ft. n. to 200 ft. n. Bloor.	.2	.....	200	.....	.....	"
Collier Street	200 ft. n. to Bismark.	.3	.....	250	.....	.....	"
	100 ft. w. from Park Rd	3.4	1,400	575	.....	.....	"
	100 ft. w. to 200 ft. west	3.1	.....	450	.....	.....	"
	200 ft. w. to 300 ft. "	.73	.....	575	.....	.....	"
	300 ft. w. to 500 ft. "	1.32	.....	300	.....	.....	"
	500 ft. w. to 550 ft. "	.16	.....	200	.....	.....	"

Pavement—Asphalt

Observations made May 14th and 18th, 1908.

Load—4½ tons.
 Lorry—2,740 lbs.
 Team—2,940 lbs.

Street.	Distance.	Grade.	Wet.		Dry.		Remarks.
			Starting Pull.	Average Pull.	Starting Pull.	Average Pull.	
Yonge Street.....	Cumberland to Yorkville	2.2	1,300	325	1,400	400	Badly worn.
	Agnes to Edward .....	.57	1,300	330	1,400	520	Good condition.
	Edward to Elm .....	.75	1,400	360	1,500	680	Good condition.
	Davenport to Collier	1.00	1,400	425	1,400	480	Poor condition.
	180 ft. n. of Severn	2.60	1,400	500	1,400	650	Poor condition.
	McGill to Carlton	2.47	1,200	530	1,500	760	Good condition.
	Carlton to Wood	2.65	1,400	540	1,450	760	Good condition.
Bain Avenue	100 ft. e. Broadview ..	4.0	.....	.....	1,500	650	Good condition.
Gerrard Street.....	Logan Avenue to Howland.	1.6	.....	.....	1,400	500	Good condition.

Accountant's Statement of Expenditure for 1908

ACCOUNTS.	\$	c.	\$	c.	\$	c.
GENERAL WORKS.						
Asphalt repairs	21,266	32				
Bridges, repairs and maintenance.	16,752	26	Including Crawford St. bridge, Riverdale Park footbridge and Poplar Plains Road culvert.			
Dredging slips.	6,998	25				
Engineering and expenses.	841,424	62				
Less transfers credited.	7,639	82				
			33,784	80		
Esplanade, docks, wharves, etc.			3,833	24		
Express and cabmen's shelters.			206	93		
General purposes.	826,350	25				
Water for flushing sewers.	10,000	00				
			36,350	25		
Level crossings			7,948	36		
Maintenance of lavatories.			3,123	36		
Permanent crossings.			3,026	26		
Private drains.			58,530	42		
Road ways			52,721	66		
Sidewalks.			14,624	81		
Sand pump No. 1—maintenance.			8,618	21		
Sand pump No. 2—maintenance.			12,071	80		
Snow cleaning, crossings and chamelling.			16,470	59		
Stone for House of Industry.			1,092	28		
Street tablets and house numbering			1,977	96		
Track repairs.			164,700	66		
Tug "National," maintenance.			2,575	14		
Weed cutting.			829	89		
			467,502	05		
Less amounts paid Treasurer for private drains			66,002	08		
					401,499	97
SPECIAL WORKS.						
Asphalt plant.			3,136	66		
City yard, Delancy Crescent			241	71		
City yard, Reid Street.			1,397	95		
De Grassi Street sewer—enlargement.			1,621	20		
Don straightening and Ashbridge's Bay improvements.			66,944	41		
Carried forward.	72,341	93	401,499	97		

ACCOUNTS.	\$	c.	\$	c.	\$	c.
<i>Brought forward</i>	72,341	93	401,499	97		
Eastern entrance of railways and viaduct.....	8,805	96				
Electrical power distribution plant.....	4,407	11				
Jones Avenue culvert.....	738	25				
Lake Shore Road repairs.....	9,600	07				
Lake Shore sidewalk reconstruction.....	1,801	09				
Lake Shore rubble wall.....	6,137	16				
Lapsdowne Avenue subway.....	27,746	31				
Leslie Street sewer.....	12,535	34				
New public lavatories.....	5,951	42				
Princess Street yard.....	10,197	42				
Reconstruction of track allowance.....	40,434	00				
Rentals—St. Andrews yard.....	739	00				
Sea wall, in front of Exhibition Grounds..	14,512	54				
Sea wall, Indian Road to Humber.....	12,131	89				
Sewage disposal and water filtration.....	1,288	11				
Sidewalks in front of City properties—						
Augusta Ave., w.s., Denison Square to						
Bellevue Place.....	207	07				
Bathurst St., e.s., Nassau to Roseberry	586	65				
Broadview, w.s., 29 ft. n. Gerrard to						
811 ft. n.....	810	69				
Caer Howell, n.s., Simcoe to University	134	99				
Dufferin St., w.s., Opp. Kent School..	419	25				
James St., w.s., Queen to Albert.....	547	81				
King St., s.s., Dufferin to Mowat.....	256	10				
Roseberry Ave., n.s., 150 ft. e. Bath-						
urst to 184 ft. further e.....	250	53				
St. Patrick St., s.s., Bathurst to Ryerson	422	46				
Winchester St., n.s., Sumach to 423 ft. e.	309	00				
Gerrard St. curb, s.s., Seaton to Ontario..	76	01				
Simcoe Park groynes.....	2,276	75				
Snow cleaning, sidewalks.....	11,867	64				
Street railway matters.....	314	04				
Testing machine.....	1,303	81				
Trunk sewer.....	153,213	94				
Wallace Avenue footbridge.....	417	65				
Winchester Street repairs, Sumach to						
Danforth.....	4,430	35				
			408,212	34		
ISLAND COMMITTEE WORKS.						
<i>Under the charge of the City Engineer.</i>						
Bridge repairs.....	204	50				
Chippewa Avenue channel and roadway..	2,244	60				
New engine, Island pumping station.....	3,515	75				
Sidewalks, bicycle path, etc.....	4,444	33				
Water works, Island station.....	5,192	27				
<i>Carried forward</i>	15,601	45	809,712	31		

ACCOUNTS.	\$	c.	\$	c.	\$	c.
<i>Brought forward</i>	15,601	45	809,712	31		
Wharf repairs, including Ward's Island wharf.	213	00			15,814	45
LOCAL IMPROVEMENT WORKS.						
Pavements.....	809,965	05				
Curbs.		26,146	80			
Sidewalks: Concrete.....	\$264,304	39				
Brick.....	1,227	32				
Wooden.....	1,474	80				
			267,006	51		
Sewers.		119,504	22			
Street openings, gradings, etc		73,392	79			
Railway pavements		19,231	79			
				1,315,247	16	
					2,140,773	92

Respectfully submitted,

WM. McCARTNEY,
Accountant.

ACCOUNTS.	\$	c.	\$	c.	\$	c.
WATER WORKS BRANCH.						
<i>Maintenance.</i>						
Maintenance and distribution.	49,775	30				
Main pumping station.	56,094	39				
" " " coal.	50,804	22				
Meter and machine shop.	13,952	10				
Store house.	2,360	70				
Hydrants and valves.	6,533	67				
Cartage.	8,110	48				
High level station.	17,311	75				
Reservoir.	8,184	83				
Miscellaneous.	100	00				
Electrolysis.	462	74				
			213,690	18		
<i>Construction.</i>						
House services.	75,169	98				
Less credits paid Treasurer.	16,265	79				
			58,904	19		
<i>Renewals.</i>						
House services.	5,241	84				
Short lengths extra fire hydrants.	2,270	32				
Dead ends.	227	17				
			7,739	33		
SPECIAL SERVICES.						
Tunnel and connections.	211,985	41				
High pressure fire system.	88,890	66				
Water filtration.	2,062	92				
New meters.	4,076	38				
High level station, new engine No. 3.	19,168	78				
" " " No. 4.	9,303	50				
Main pumping station, new engine No. 7.	33,907	25				
<i>By-law No. 4982.</i>						
26-in. main, Bathurst to Roncesvalles.	76,937	22				
20 and 16-in. mains, St. George westerly	78,348	64				
16 and 12-in. mains, Rosedale, Yonge to						
Glen Road.	11,793	76				
12-in. main, Spadina Ave.	16	75				
12-in. main, Strachan Ave.	87	17				
12-in. main, Queen, Kingston Road to e.						
City limits.	874	14				
Carried forward.	537,452	58	280,333	70		

ACCOUNTS.	§	§.	§	c.	§	c.
<i>Brought forward</i>	537,452	58	280,333	70		
12-in. main, Queen, Broadview to Leslie..	2,447	06				
12-in. main, Gerrard, Leslie to east City limits	314	50				
12-in. main, Danforth, Broadview to east City limits	4,388	55				
12-in. main, Symington, Bloor to Royce..	7,333	51				
12-in. main, Roncesvalles, Queen to Dundas	15,283	35				
12-in. main, Lansdowne, Queen to Rideau	6,183	21				
8-in. main, Exhibition Grounds, Manufacturers' Bldg	1,726	15				
6-in. main, Arthur-Shaw connection	408	36				
6-in. main, Greenwoods, Danforth to 470 ft. south.....	43	31				
6-in. main, Kippendavie, Queen to 700 ft. south	47	57				
6-in. main, Galt Ave., Gerrard to 850 ft. north	132	93				
6-in. main, Byron, Danforth to Chatham .	218	38				
6-in. main, Chatham, Byron to Greenwoods	66	26				
6-in. main, Harbord, Bathurst to Clinton.	3,112	83				
6-in. main, Boswell Ave., 250 ft. e. Bedford to Avenue Rd	863	48				
6-in. main, Lowther Ave., Bedford Ave. to Avenue Road.....	797	98				
6-in. main, Berryman, Davenport Rd. to Avenue Road	824	17				
6-in. main, John, King to Queen	1,413	64				
6-in. main, Pearl, John to Duncan	562	54				
6-in. main, Pearl, Simcoe to 225 ft. west.	359	33				
6-in. main, Don Esplanade, King to 400 ft. south.....	320	91				
6-in. main, through Parkdale.....	10,898	49				
Cutting in valves under By-law No. 4982.	1,146	95				
Additional hydrants under By-law No. 4982.....	27	00				
Dead ends under By-law No. 4982.....	3,804	75				
<i>Under By-law No. 4357.</i>						
Ruskin Ave., 630 ft. w. Perth to 150 ft. w.	188	71				
Edwin Ave., Ruskin to 150 ft. north.....	196	61				
Franklin Ave., Ruskin to 300 ft. north...	337	28				
<i>Carried forward</i>	600,810	39	280,333	70		

ACCOUNTS.	\$	c.	\$	c.	\$	c.
<i>Brought forward</i>	600,810	39	280,333	70		
SPECIAL MAINS.						
Sunnyside Orphanage	640	90				
Lovatt Place fire main.....	373	44				
St. Andrews College	1	50				
Russell Hill Road, City limits to 479 ft. w.	15	70				
Farnham Ave., e. City limits to 100 ft. e.	96	48				
Clinton Ave., 600 ft. e. City limits to 300 ft. east	327	83				
			602,266	24		
Revenue mains			50,649	69		
					983,249	63

Respectfully submitted,

WM. McCARTNEY,
Accountant.



TA Toronto. Dept. of Public
27 Works
T7A2 Report of the city
1908 engineer



Engineering

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